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1939

PENCIL  
POINTS

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# PENCIL POINTS

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EDITOR

CHARLES MAGRUDER  
ASSOCIATE EDITOR

DON GRAF  
TECHNICAL EDITOR

*The Monograph Series*  
RUSSELL F. WHITEHEAD  
EDITOR

Published Monthly by REINHOLD PUBLISHING CORPORATION, Stamford, Conn., U.S.A.

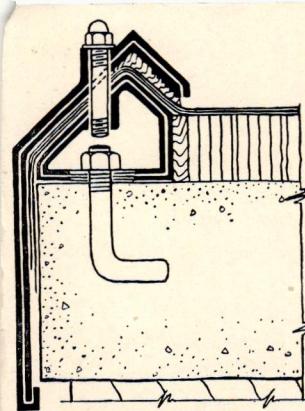
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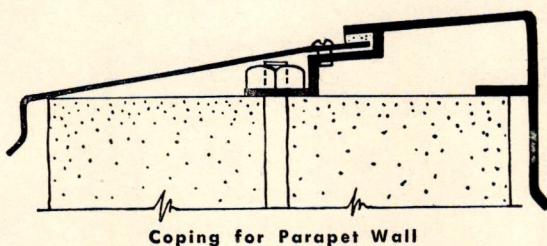
Executive and Editorial Offices: 330 West 42nd Street, New York

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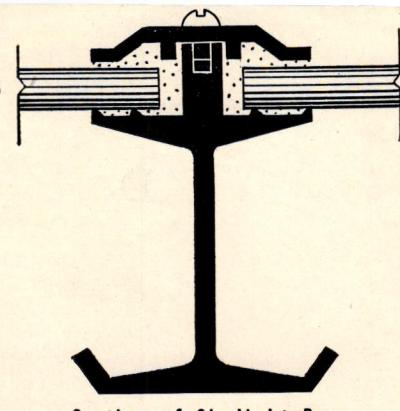
## TYPICAL APPLICATIONS OF EXTRUDED SHAPES



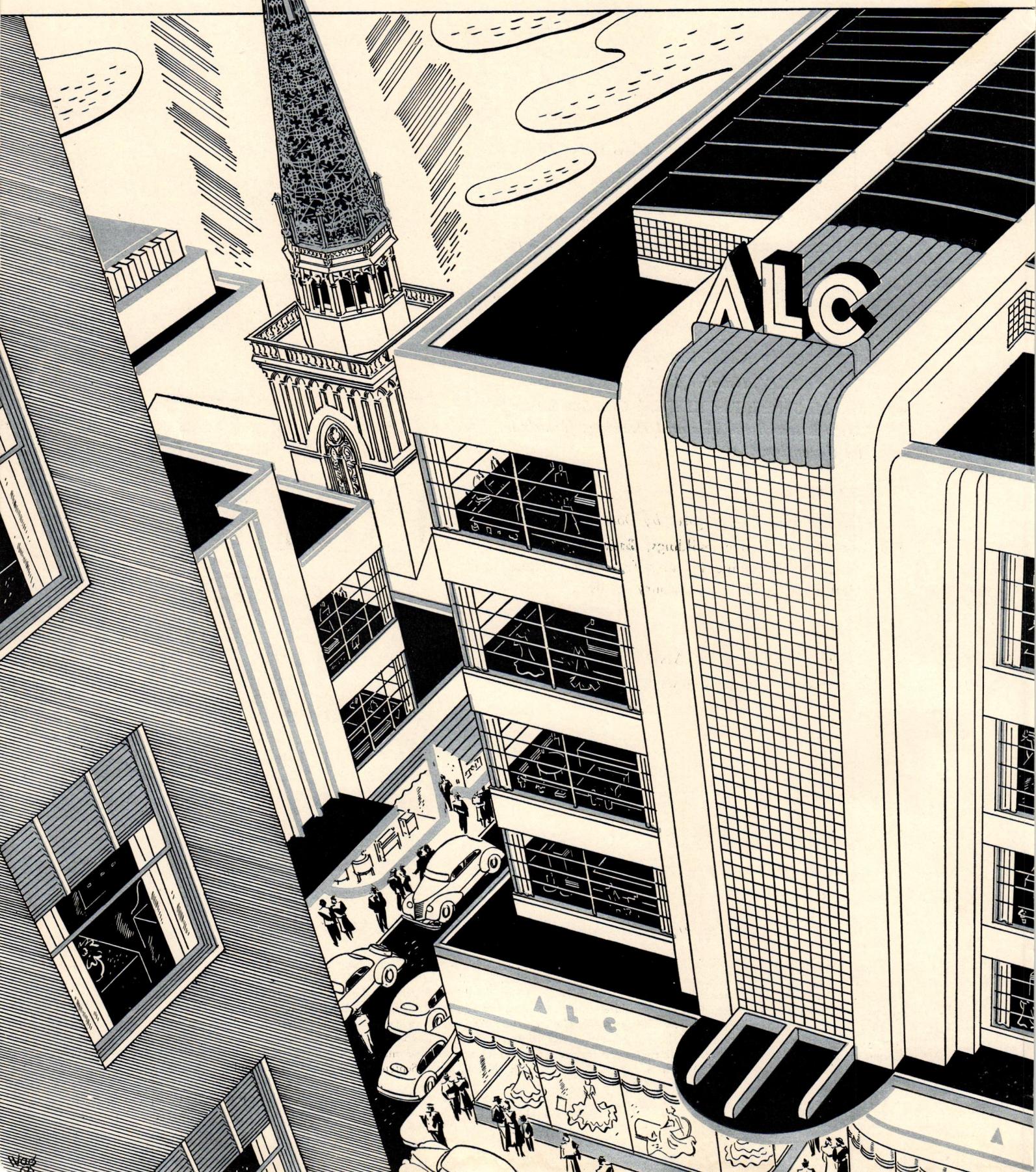
Gravel Stop and Fascia



Coping for Parapet Wall



Section of Skylight Bar



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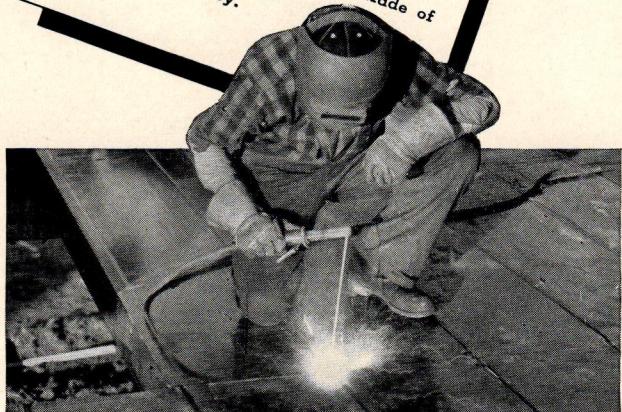
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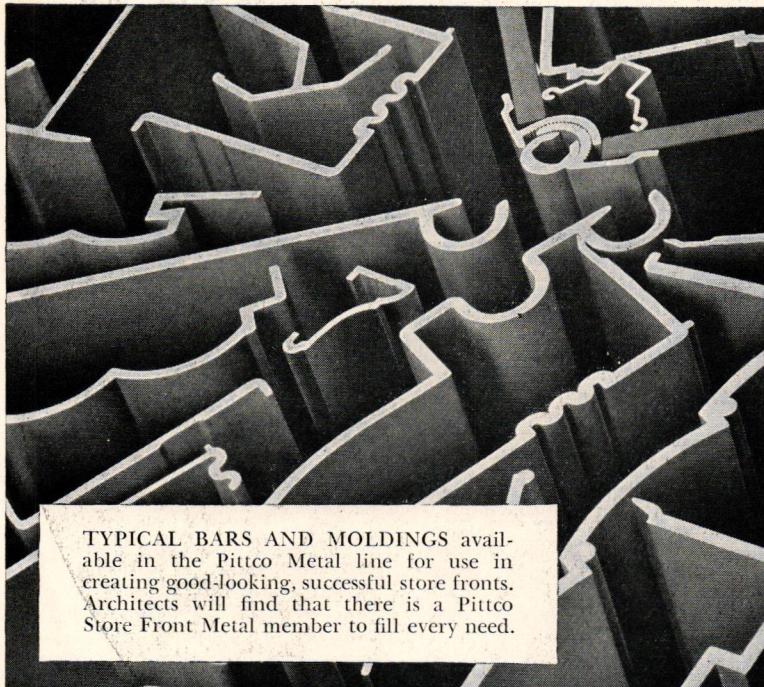
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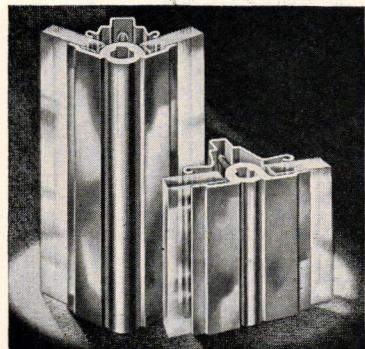


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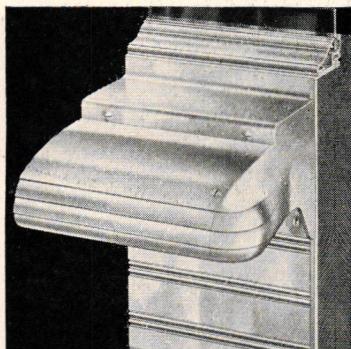
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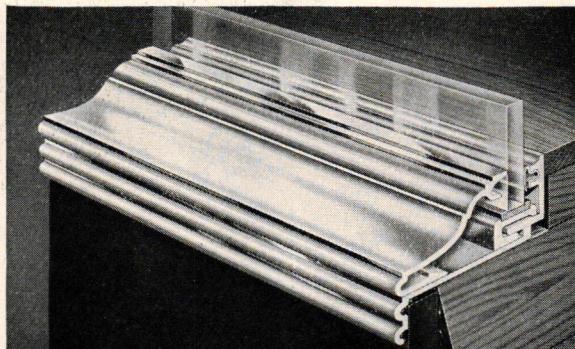
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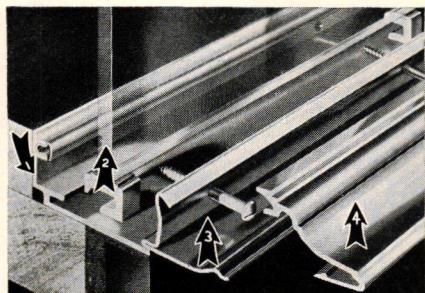
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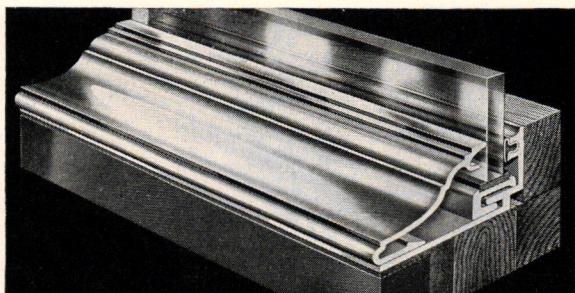
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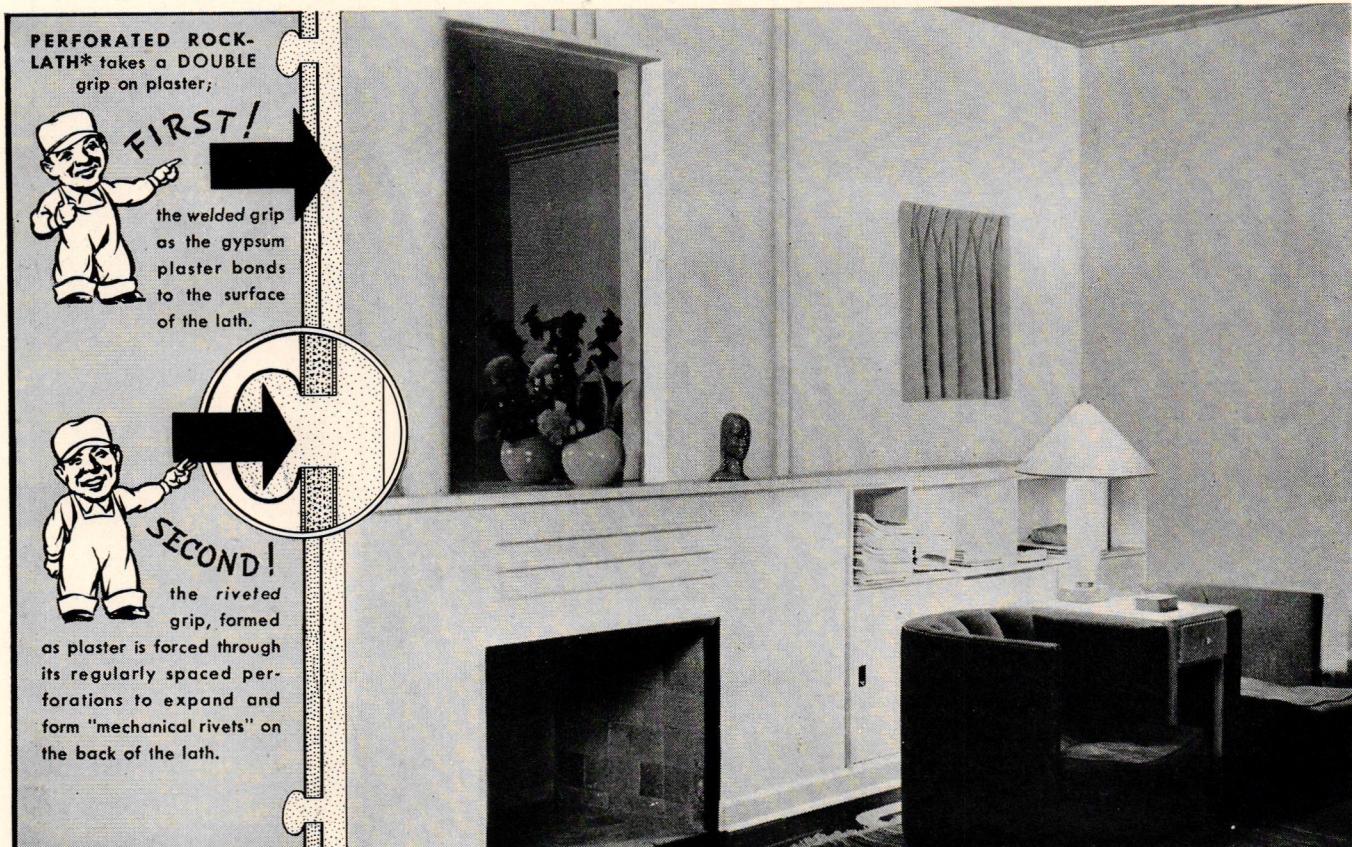
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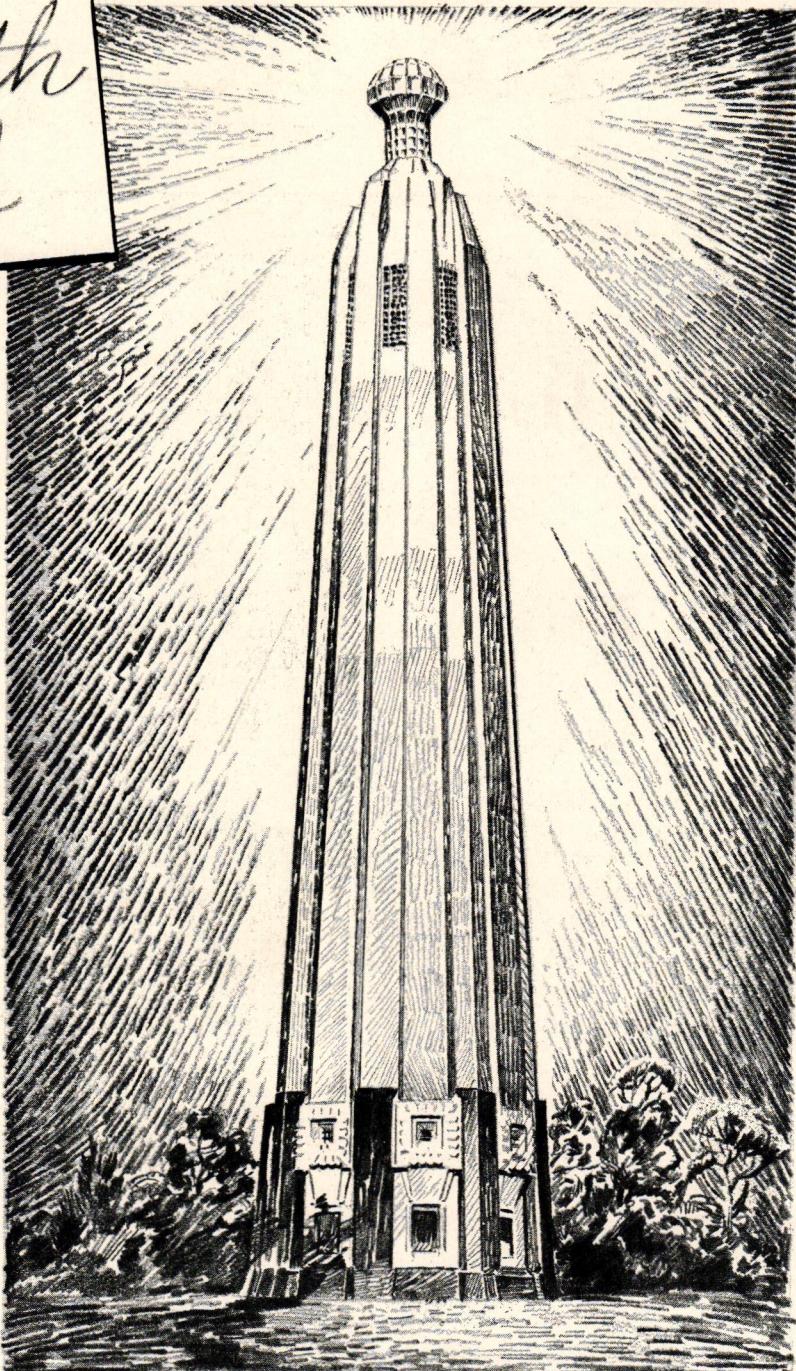
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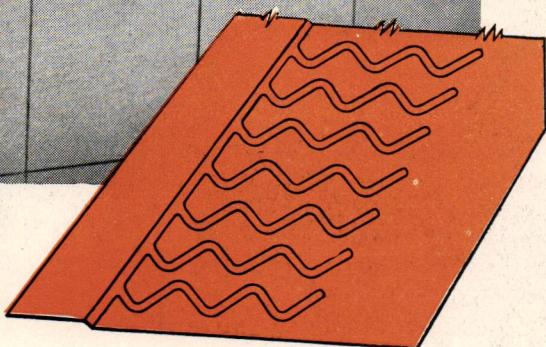
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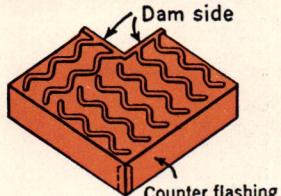
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Anaconda Publication C-28 contains complete description of and suggested specification for Anaconda Through-Wall Flashing.

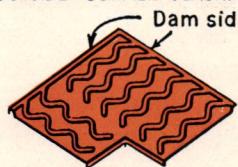
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SS116



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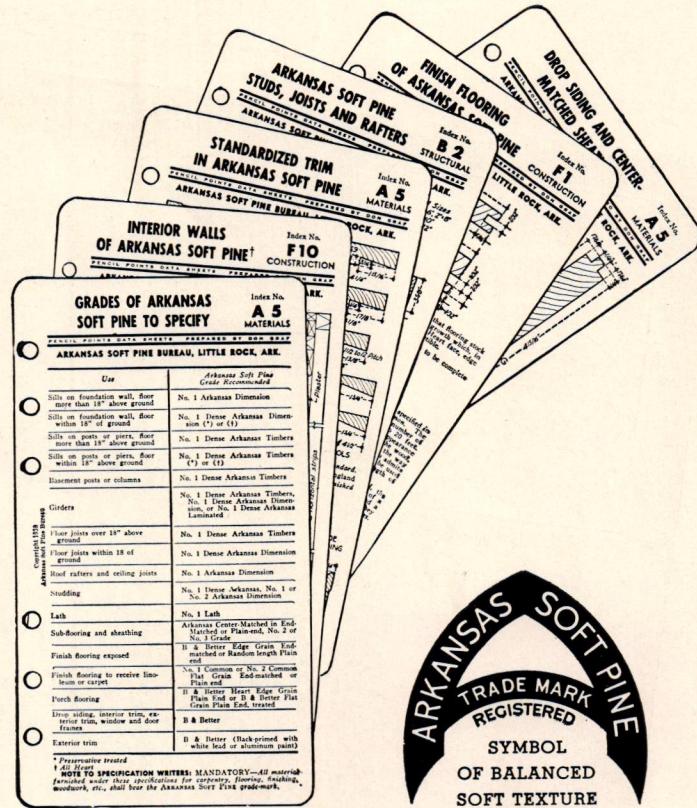
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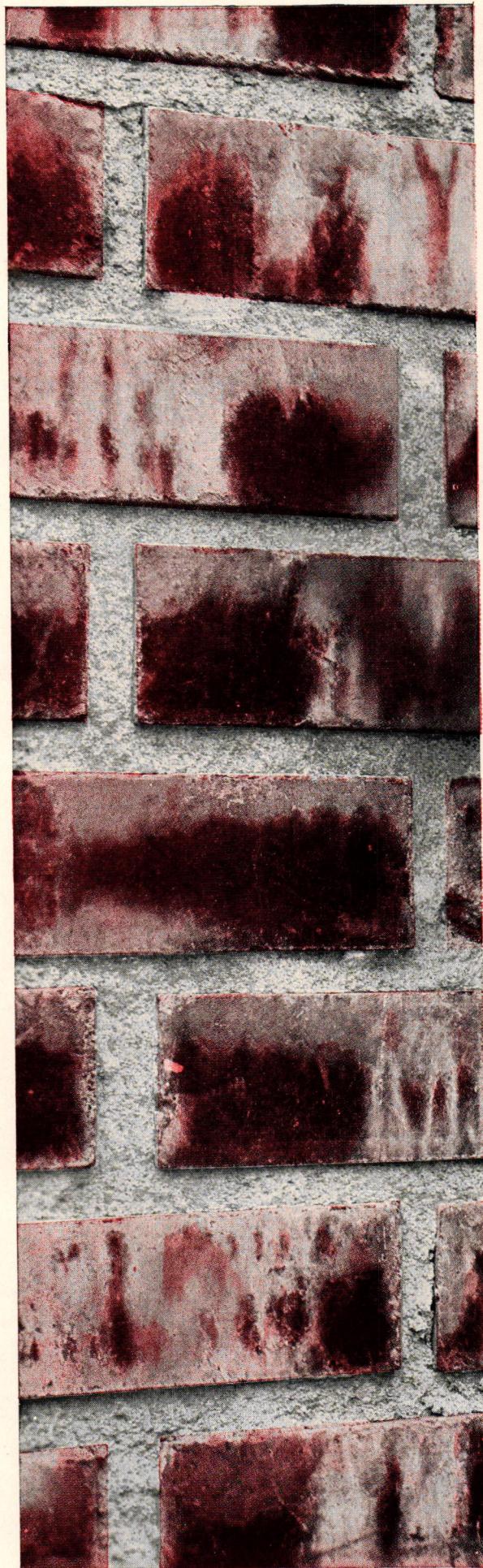
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# HERE, THERE, THIS & THAT

## Patter Presents A Guest Writer

Departmental appropriations, augmented by PWA allotments, have provided architectural work for 1938 to cover almost the entire field of building construction in these United States and possessions . . . from the smallest dwelling at a Border Immigration Station to a padded cell at a Federal Penitentiary. Architectural men by the gross have been placed on Uncle Sam's payroll again and their number is now greater than ever.

Among the recalled "temporaries" is a gentleman whose international travels make him a commentator architectural extraordinaire. His return to Procurement gives us the opportunity to have him as guest writer. With fluent pen, writes William S. Morris:

My unrequested retirement from Procurement about 11 months ago gave me the opportunity to make the Western Trip across our nation, to "See America First" at last. It is hackneyed to say that a trip across the American continent is an education in itself, yet few Government architects take advantage of this method of enhancing government careers.

The usual Classic European Tour is likely to be replaced in the future by a Western Trip supplemented by a side excursion to Mexico. Middle West architects frankly admit that their work is being influenced by the modern trends emanating from Mexico and California, where the tropical sun is speeding the germination of new ideas. It is interesting to note that beyond the Rockies we find, side by side, the old Indian Civilization and the latest trends in art, in other words, an ethnographic museum that encompasses about five states and next to it a laboratory of new forms in art.

All through the countless small towns on the westward way WPA signs reminded us of the far-flung work directed from Washington. In most places the new post office, with its well-kept lawn, was by far the best building in the town. It symbolizes the Government's authority and influence on the life of its citizens . . . by the removal of the postmaster from a corner he occupied in the local grocery store to a new building that could very well be an example of good taste

and orderliness. Seeing our new post offices "in the flesh" brings to mind that the recent nationwide Post Office Design Competition proved conclusively that the work of the Procurement designers could easily equal the best that may be offered by private architects.

Denver likes to be called the "Gateway of the West." The surname is correct, if judged by its magnificent skyline, although from the architectural point of view it is still an Eastern town built by the adventurers of the gold rush days. But new ideas are already taking root. The new Railway Exchange Building by Fisher and Fisher, the addition to Albany Hotel by Burnham Hoyt, and a department store by Earl Morris are striking novelties amid the old Romanesque buildings of the gold and "Silver Tabor" period. The planning early this year of the new State Office Building (opposite the State Capitol) in which

(Continued on Page 40)



*This bold concrete sculpture by young Marvin Martin, over the entrance to the new high school at Boulder, Colo., precipitated a controversy climaxed by the spilling of paint over the work*

## Scholar Postpones Proposed Lectures

Changed conditions in China now make it imperative that S. C. Liang (Liang Ssu-Ch'Eng) remain in personal charge of the Society for Research in Chinese Architecture, of which he is the Director of Technical Studies, instead of filling engagements of a lecture tour in the United States next year, he has cabled the committee sponsoring his proposed visit.

"In view of the interest in his work, evidenced by architectural schools, museums, and university departments specializing in Far Eastern studies, we look forward to an opportunity of inviting Mr. Liang to this country again, when the situation in China will have improved," it has been announced by the committee, composed of Dean William Emerson, of M.I.T.; Paul Philippe Cret, Philadelphia; Clarence Stein, New York; and Mrs. J. K. Fairbank, Cambridge, Mass.

"Since the arrangements for his lecturing here next year have already been successfully completed, both he and the committee regret very much the necessity of postponing his trip to the United States."

## Boston Discusses Climate, Vacations

Even an architect's feelings towards the weather, at any given moment, are conditioned by four thoroughly selfish motives looking to personal gain, or safety, or pleasure, or vegetable comfort. Yet it is true that New Englanders rather enjoy talking about their climate with good-humored tolerance; and in making favorable though inaccurate generalizations anent its vagaries, such as those featuring cool sea breezes (which really never blow when you need them), or crisp, wintry days (that are almost as rare as the East Wind).

This summer the locals in our noble calling have been harassed as usual, or more so, by the really abominable climatic servings from above and about. In private offices, working drawings on cloth have been splotched with the marks of sweat that fell or rain that splattered in. But it is presumed that state and municipal drafting forces have merely to contend with rainwater; that, owing to governmental solicitude for a worker's comfort, the first bead of relatively honest sweat to appear on the chief's nose is good for a half-holiday.

Claiming no definitive solution to it all, a "Get-Summer Club" has come into being "for mass-cursing in congenial surroundings and general cas-

(Continued on Page 42)

**The BUILDER says:**

"To give our owners the best materials available, we always use MFMA Northern Hard Maple for floors where Maple is specified."

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Greensboro, N. C.  
(Over 40 years of Successful  
Building Construction)

**The ENGINEER says:**

"Our experience over 25 years has been that only HARD MAPLE flooring will stand the floor service required in a textile plant. Northern Hard Maple was specified for the Grabur Silk Mill for this reason."

H. V. BIBERSTEIN  
Charlotte, N. C.  
Mill Architect and Engineer



*Above—"Interior of the Grabur Silk Mill, Graham, N. C., where floors of MFMA Maple are giving excellent service."*

## "A Floor That Makes EVERYBODY Happy"

There's flooring amity ahead where **MFMA** Northern Hard Maple is laid—plants, schools, stores, homes, etc. No questions later of the architect's judgment—no "make this good and that" for the builder—each year merely adds to the owner's satisfaction.

For **MFMA** Maple checks on *all* counts for mills. So tough-fibred, tight-grained, it is remarkably resistant to abrasion—will not sliver, splinter, or develop ridges, even under the wear of heavy steel-castered mill trucks. Its lasting smoothness speeds up traffic, creates no dust to injure machinery, and, properly finished, requires brushing alone to clean. It simplifies alterations, machinery shifting and renewal.

Employees, too, find Hard Maple ideal.

Light-reflecting and sound-absorbing—warm, dry and resilient—clean and sanitary. It slows up fatigue, protects health, pleases the eye—in every way contributes to workers' comfort, efficiency, good will.

Everybody's happy when you lay **MFMA** Maple—architect, builder, employee, and owner. You can make sure your flooring is genuine Northern Hard (**MFMA**) Maple, under Association grade supervision and guarantee. This is simply done, by specifying **MFMA**\* Maple and looking for this association trademark on the flooring you receive.

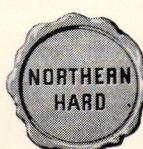
• • •

See our catalog data in Sweet's, Sec. 11/76.  
Write for folder describing heavy-duty finishes for old  
or new floors, which seal Maple's surface and  
further reduce cleaning costs.

\*To be sure of Association guaranteed grading, specify and look for the **MFMA** trademark (indented and stamped). The following manufacturers are licensed to use it:

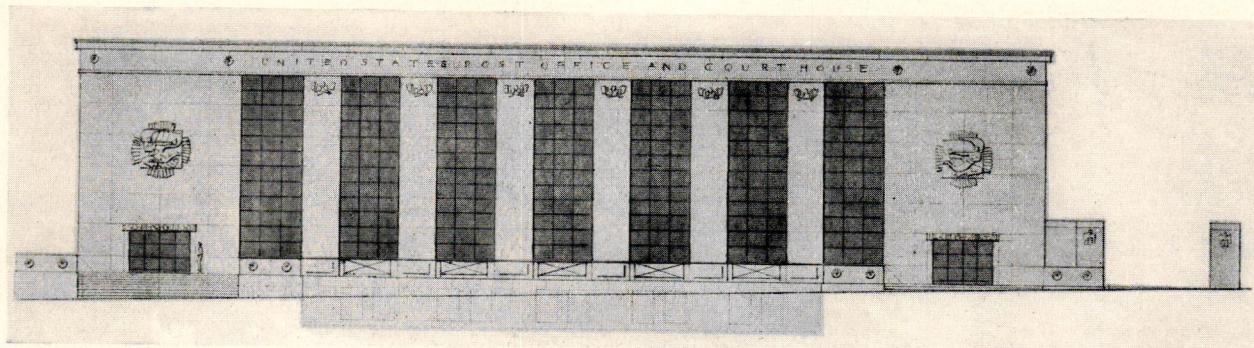
Beck, August C. Co., Milwaukee, Wis.  
Brown Dimension Co., Manistique, Mich.  
Bruce, E. L. Co., Memphis, Tenn.  
(Mill at Reed City, Mich.)  
Connor Lumber & Land Co., Laona, Wis.  
(Sales Office, Marshfield, Wis.)  
Farrin Lumber Co., M. B., Cincinnati, O.  
Holt Hardwood Co., Oconto, Wis.  
Kerry & Hanson Flooring Co.,  
Grayling, Mich.  
Kneeland-Bigelow Co., Bay City, Mich.  
Kneeland-McLurg Flooring Co.,  
Phillips, Wis.  
North Branch Flooring Co., Chicago, Ill.  
Oval Wood Dish Corp.,  
Tupper Lake, N. Y.  
Robbins Flooring Co.,  
Rhinelander, Wis.  
Stephenson Company, I., Wells, Mich.  
Wells, J. W. Lumber Co.,  
Menominee, Mich.  
Wisconsin Land & Lbr. Co.,  
Hermansville, Mich.  
Yawkey-Bissell Lumber Co.,  
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*Floor with*  
**MFMA** Maple



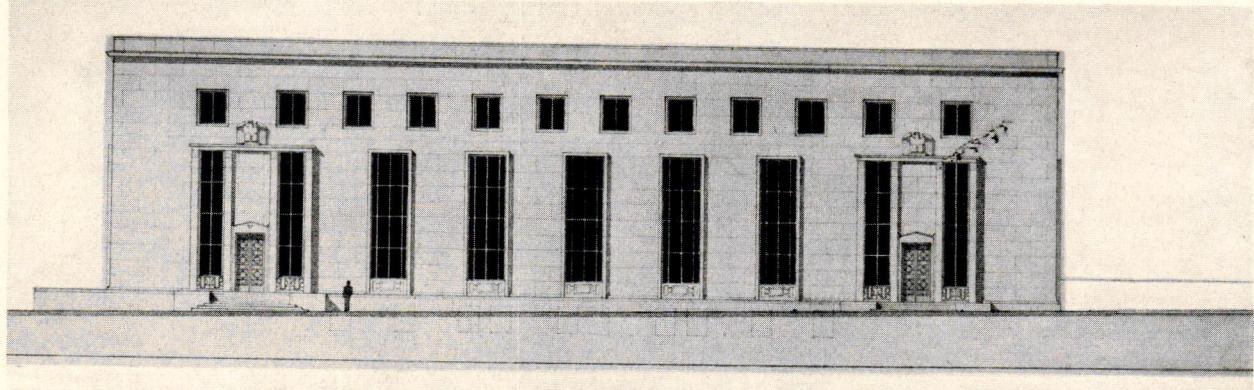
**MAPLE FLOORING MANUFACTURERS  
ASSOCIATION**

1785 McCormick Building, Chicago, Illinois



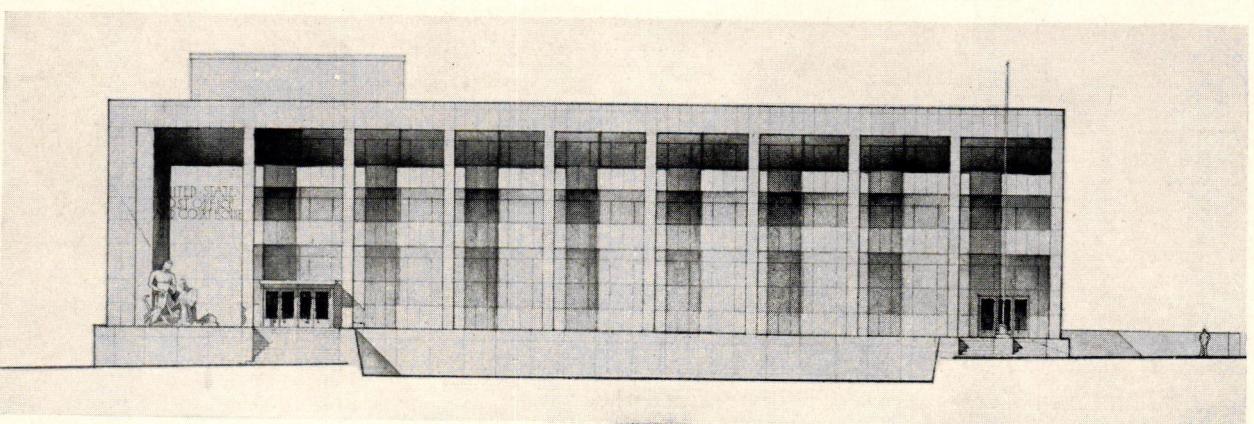
PRIZE-WINNING DESIGN

THOMAS HARLAN ELLETT



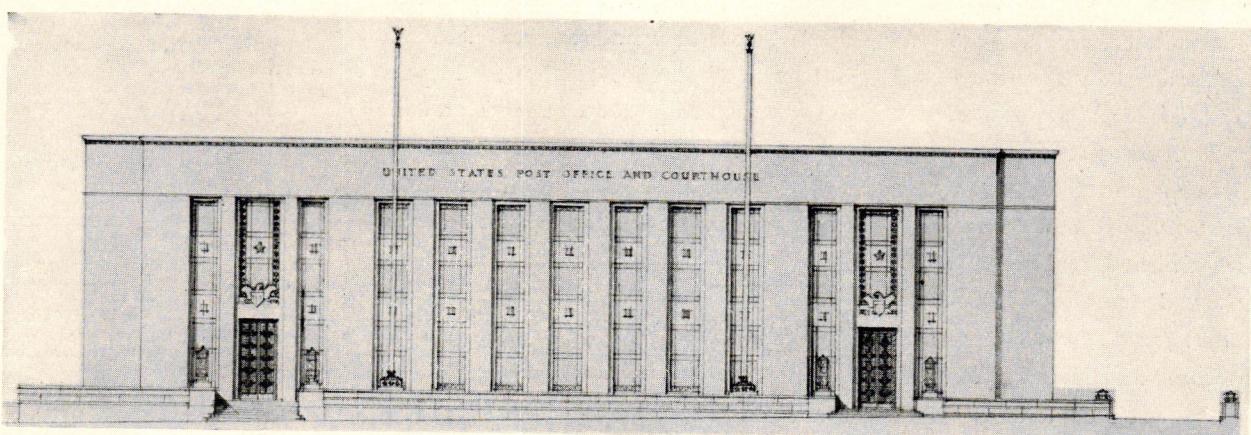
HONORABLE MENTION

HOLABIRD & ROOT



HONORABLE MENTION

WALTER F. BOGNER & HUGH STUBBINS



HONORABLE MENTION

ELDRIDGE SNYDER

*The winning design in the recent Competition for the \$450,000 Post Office and Court House, Covington, Ky., conducted under the jurisdiction of the Treasury Department, Procurement Division, is presented here with the three designs accorded Honorable Mention. Thomas Harlan Ellett, Architect, New York City, won the \$4,500 prize with his design and is to receive a fee of \$4,500 as Consultant during the preparation of working drawings*



**The American Institute of Architects**  
The Octagon, 1741 New York Avenue  
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### **The Standard Contract Documents**

These contract forms have stood the test of time. They have reduced to a minimum lawsuits and misunderstandings.

They make for good will between the Architect, the Owner, and the Contractor.

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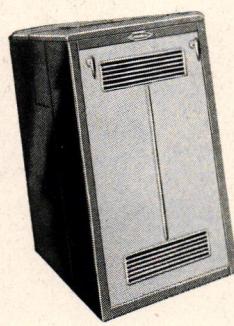
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would not buy a  
finer heating  
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If you had all the money you ever dreamed of . . . if you had the ablest of consulting engineers to advise you . . . you couldn't buy a finer heating machine than this Gilbarco Automatic Boiler Unit. Whenever steam, vapor or hot water heating is required, it's in a class by itself.

In this handsome unit, the Gilbarco Flexible Flame Oil Burner—famous for economy of operation—is fitted to a specially efficient, durable cast-iron boiler. This combination gets maximum heat from the oil—and distributes this heat with maximum efficiency. Hence, "Most Heat Per Dollar." What's more, besides keeping homes warm, this Gilbarco Automatic Boiler Unit (oil fired) provides for a luxuriant abundance of hot water. Like every Gilbarco Unit, it's

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You really owe it to yourself to learn more about Gilbarco Oil Heating. There's a Gilbarco Automatic Boiler Burner Unit, Conversion Oil Burner, or Warm Air Conditioning Unit to meet all heating requirements. Get in touch with your nearest Gilbarco dealer. If there isn't one in your locality, write us and we'll have a dealer call—at your convenience. We'll also send you—FREE—our booklet on OIL HEAT. Address Desk H-1007, Gilbert & Barker Mfg. Co., Springfield, Mass. (or Toronto, Canada).

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# ARIZONA CLIMATE

BROUGHT TO FAMOUS MASSACHUSETTS HOSPITAL

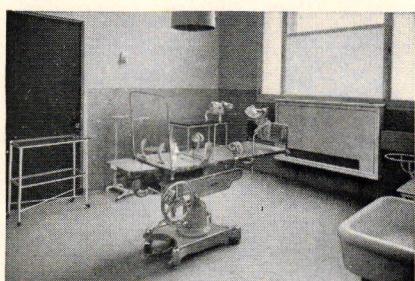
BY STURTEVANT AIR CONDITIONING EQUIPMENT!



One of the Air Conditioned bedrooms in the Corey Hill Hospital, Brookline, Mass.



Corey Hill Hospital, Brookline, Mass.



View of Air Conditioned operating room, showing Sturtevant Recirculating Unit.



Fans, Blowers, Air Washers, Air Conditioning, Heating, Vacuum Cleaning, Drying, Mechanical Draft Equipment

## Exceptionally low relative humidity maintained to aid in treatment of arthritis and other rheumatic fevers

**Installation at:** Corey Hill Hospital, Brookline, Mass.

**Extent of Air Conditioning:** Building completely air conditioned throughout, including all 50 bedrooms, operating rooms, solariums and corridors. Hospital is cooled, dehumidified and ventilated in summer, and heated, humidified and ventilated in winter.

**Purpose of Air Conditioning:** 1. For the effect of controlled temperature and humidity in the treatment of asthma, hay fever, arthritis and rheumatic ailments, and for general surgery. 2. For the comfort of patients and staff.

**Principal Problem Solved:** Maintenance of lower than usual relative humidity without recirculation of air from one room to another.

**Sturtevant Apparatus Used:** Mechanical Fans and Air Blenders, Local Recirculating Air Blender Units.

Main illustration shows Sturtevant local recirculating unit of the air injector type. Recirculating units of this type are used throughout the hospital. From a central system they receive air which has a low relative humidity at correct temperature for heat balance, and discharge this air into the rooms at the desired temperature without draft.

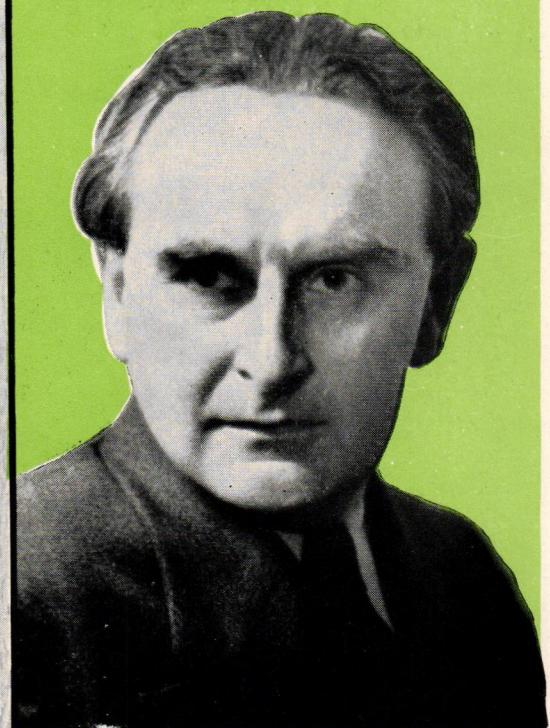
B. F. STURTEVANT COMPANY  
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Branch Offices in 40 Other Cities  
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**Sturtevant**  
REG. U. S. PAT. OFF.  
*Puts Air to Work*

**"PLYWOOD  
is perhaps the  
most significant  
of the more recently  
perfected structural  
items which usher  
in a renaissance  
of wood  
construction  
and bring  
it up-to-date"**

... Richard J. Neutra



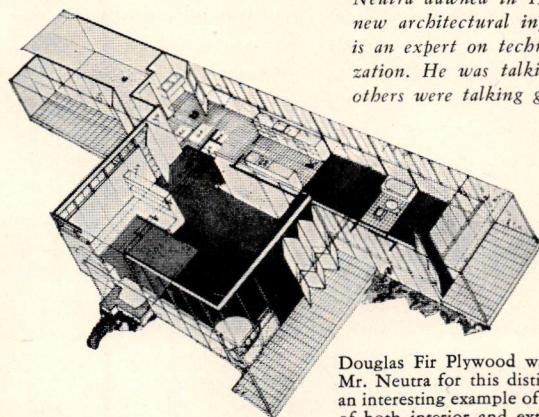
DOUGLAS FIR PLYWOOD is modern and up-to-date. Here's what it offers you! Flexibility of design — large, light-weight panels — natural wood texture and beauty — unusual strength, due to cross-laminated construction — and substantial economies in first cost, time and labor.

Plywood sheathing and sub-floors add rigidity to the structure — make it air-tight, dust-proof, more comfortable. For interiors, Douglas Fir Ply-

wood is practical for wall paneling, built-ins, ceiling and walls of play-rooms — finishing of all kinds.

Sweet's Catalog contains complete data on Douglas Fir Plywood — grades, sizes and recommended uses. Our well-equipped Technical Division offers cooperation to architects and engineers in adapting Douglas Fir Plywood to special problems. Address DOUGLAS FIR PLYWOOD ASSOCIATION, Tacoma Bldg., Tacoma, Washington.

**DOUGLAS FIR  
PLYWOOD**  
*Real Lumber*  
MADE LARGER, LIGHTER  
SPLIT-PROOF  
STRONGER



Douglas Fir Plywood was specified by Mr. Neutra for this distinctive home—an interesting example of his correlation of both interior and exterior function.

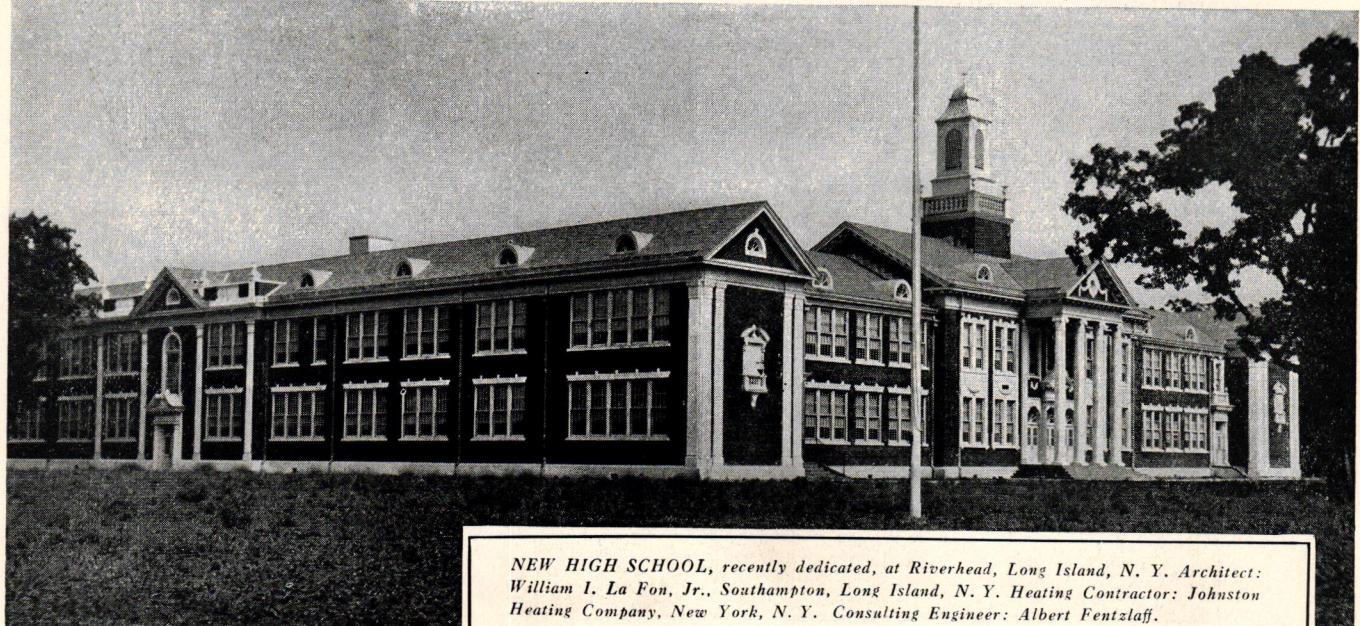
• Richard J. Neutra of Los Angeles ranks easily among the most important architects practicing in America today. Neutra-designed homes are outstanding examples of complete correlation of function, both internally—in the relation of parts and circulation between them—and externally, in relation to orientation and climate.

A graduate of the Polytechnical College, University of Vienna, Mr. Neutra has traveled throughout Europe and in Japan, China, Southern Asia and Northern Africa in connection with studies on city planning. He has done practical building work in the east, and middle west, Los Angeles, Berlin and Vienna. The unusual quality of his work has won him scores of awards among thousands of entries in numerous national competitions. Of him Fortune Magazine says, "Richard J. Neutra dawned in 1934 as the most potent new architectural influence in America. He is an expert on technical design and organization. He was talking prefabrication when others were talking girder Gothic."



# Add Riverhead High

TO YOUR LIST OF  
PROMINENT BUILDINGS USING  
**NATIONAL PIPE**



*NEW HIGH SCHOOL, recently dedicated, at Riverhead, Long Island, N. Y. Architect: William I. La Fon, Jr., Southampton, Long Island, N. Y. Heating Contractor: Johnston Heating Company, New York, N. Y. Consulting Engineer: Albert Fentzlaff.*



RIVERHEAD'S 8000 residents turned out en masse at the recent opening of its new high school. To a man, they are proud of their new school. Proud of its distinctive Georgian Colonial architecture . . . of the many modern innovations in physical equipment . . . of the comfortable size which will provide for normal increase in student body.

But most of all, Riverhead is proud that its new school has been built to last for many years. Only the finest available materials went into the construction.

One of the chief contributors to the useful life of this school is NATIONAL

Pipe. Of the many tons of pipe used here, the major tonnage is NATIONAL.

Riverhead High is typical of hundreds of private and public buildings completed, in construction, or planned. Principal objective of the planners and builders is to give these buildings reasonable expectancy of long trouble-free life. Contractors have found that the best way to meet this specification

is to use NATIONAL Pipe.

Contractors tell us they like to work with NATIONAL Pipe because it is easy to install, profitable to use. It is clean inside and out, and uniform in every property. Bends, cuts, and threads with ease. Made by the world's largest producers of tubular products, and available for prompt delivery from distributor stocks nearly everywhere.



Columbia Steel Company, San Francisco, Pacific Coast Distributors · United States Steel Products Company, New York, Export Distributors

## NATIONAL TUBE COMPANY

PITTSBURGH, P.A.

## UNITED STATES STEEL

# From the KOH-I-NOOR Sketch Book



## OLD RELIABLE . . .

The lighthouse serves them all — giant ocean liners, tramp steamers, yachts and freighters. Its complete dependability accounts for much of the safety and pleasure of modern ocean travel.

Whether you sketch for pleasure or for profit, it is important that your style be neither hampered nor limited by faulty working tools. A colored pencil that crumbles or develops gritty spots is a definite mental hazard which can throw you way off your course, and after sharpening away half of a pencil to produce a suitable point, you will be convinced that cheap pencils actually cost more than good ones.

The above drawing was done with "Mona Lisa" Oil Chalk Pencils on hand-made, hot-pressed paper. Colors were applied in the usual way with careful strokes. "Mona Lisa" colors blend with or without a solvent, though in this case considerable Koh-I-Noor Solvent was

used to attain color "depth." The slightly conventionalized sky and clouds were drawn in bands of color with a line of white paper between, this line being left even after the application of the solvent. This gives a crispness and sparkle to the drawing. Black was freely used, giving various shades of the same color and making a variety of unusually rich harmonious blends. This method agreeably combines the usual pencil and brush techniques to produce a drawing of high individual characteristics.

*Julian Michele*

*This is the eighth of a series of drawings by Mr. Michele. Others will follow from time to time.*

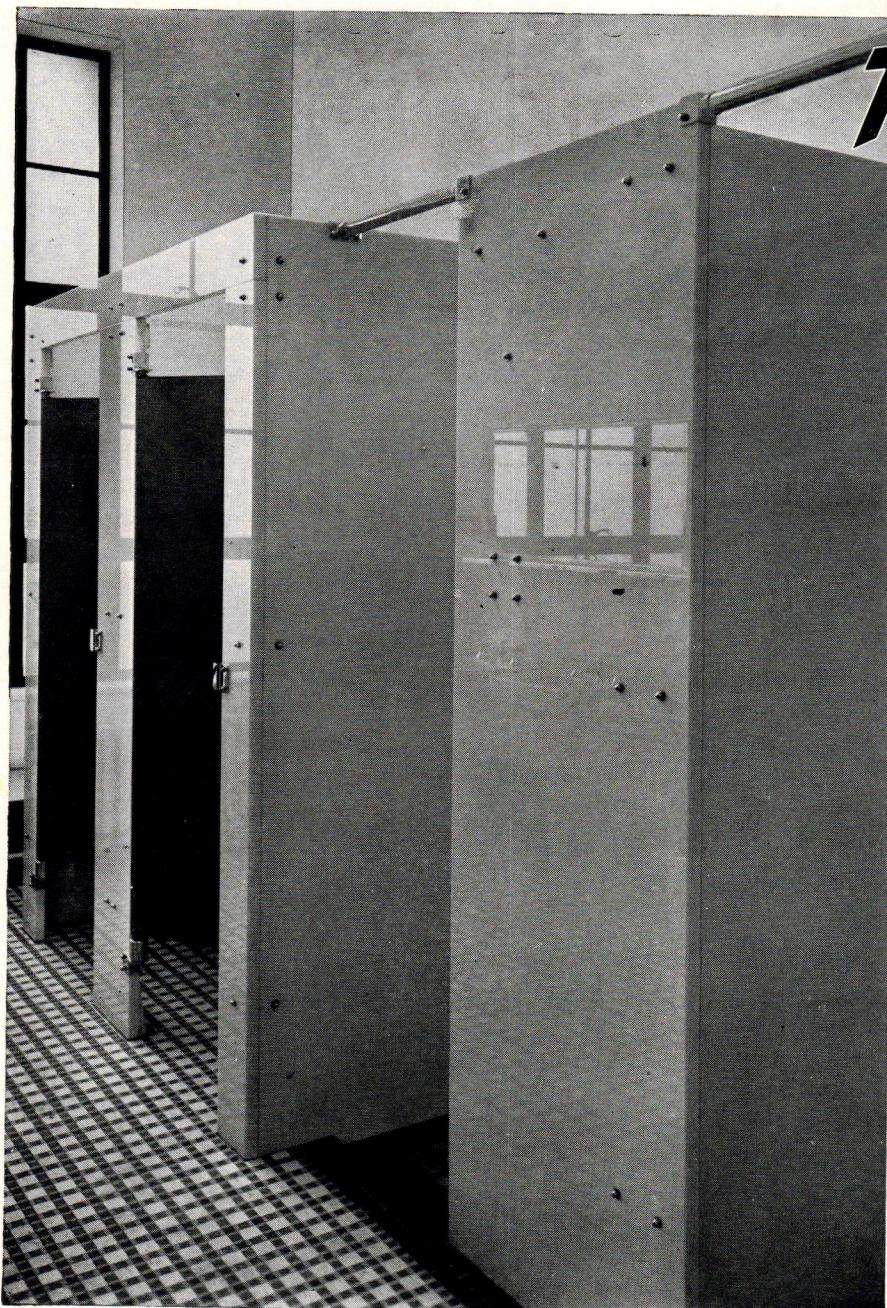
**KOH-I-NOOR 1500 Drawing Pencils  
Now**

**10c each, \$1 per dozen**

**Koh-I-Noor Pencil Company Inc. 373 Fourth Avenue, New York**

# For BEST RESULTS with Structural Glass

*start with a* **POLISHED**  
**FINISH!**



TOILET ROOM WALLS and partitions of Carrara, like these in a modern San Francisco building, are as beautiful as they are practical and permanent. Note the accurate reflectivity of the Carrara Glass, a quality which can be attained only by a mechanically ground and polished structural glass.

Distributed by

**PITTSBURGH PLATE GLASS COMPANY**

and by W. P. Fuller & Co. on the Pacific Coast

**C**ARRARA Structural Glass has but one type of finish . . . the best. Every piece produced, whatever its thickness or color, is mechanically ground and polished, like fine plate glass, to a mirror-like, reflective surface.

Just as the ground and polished surfaces of plate glass are essential for best results where you are working with large panes of transparent glass, so, in structural glass jobs, where slabs are usually quite large, a structural glass with Carrara's ground and polished finish is inevitably far superior.

Carrara's permanence, sanitation and exceptionally easy cleaning assure a long life of beauty and service with very low maintenance cost. Its polished surfaces are so true that all lippage at joints is eliminated. Whether used for toilet room walls and partitions, or for decorative purposes in the large building or the home, you will find this quality glass an effective tool to work with. We urge you to write for our free book of information entitled "Carrara, the Modern Structural Glass." Address Pittsburgh Corning Corporation, 2328A Grant Bldg., Pittsburgh, Pa., manufacturers of Carrara Structural Glass and PC Glass Blocks.



Voorhees, Gmelin & Walker

STEPHEN F. VOORHEES  
RALPH WALKER  
MAX H. FOLEY  
PERRY COKE SMITH

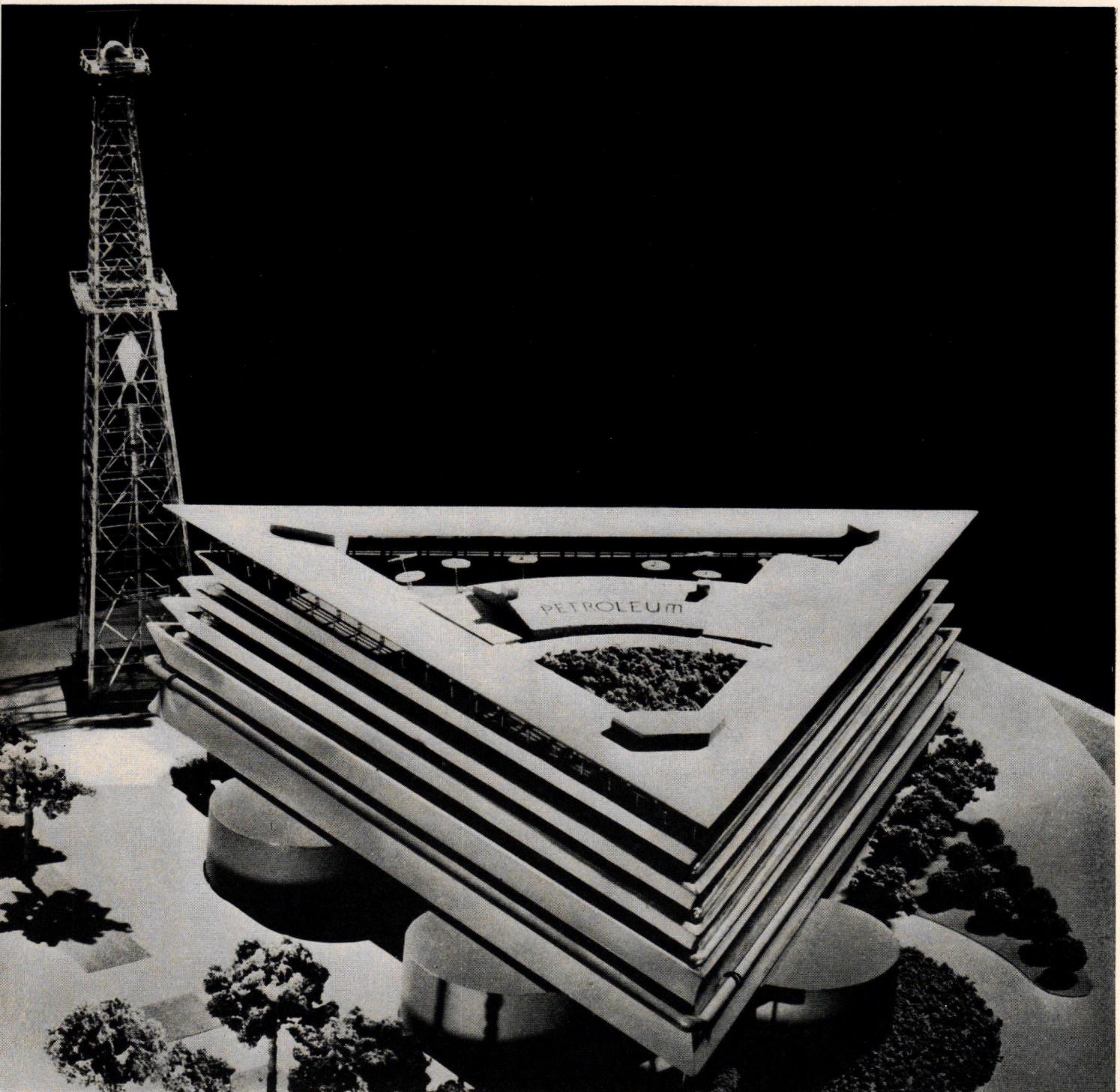
*The following pages display the growth  
in the design of an exhibition center  
for The Petroleum Industry Exhibi-  
tion Inc. at The New York World's  
Fair 1939. The changes and develop-  
ment in the drawings and sketches are  
the results of the deliberations of a  
Board of Design composed of Voor-  
hees, Gmelin and Walker, Architects,  
The Public Relations Institute Inc.  
and Gilbert Robde, Designer of Exhib-  
its. All the drawings and sketches, ex-  
cept as noted, were made in the office  
of Voorhees, Gmelin and Walker.*

NEW YORK

WORLD'S FAIR

1939

THE PETROLEUM INDUSTRY EXHIBITION INC.



*The Petroleum Industry's Exhibit fills an equilateral triangular prism 200 feet on a side and 80 feet high. The ground floor is completely open on all sides except for four cylindrical tank forms that seemingly support the horizontal concavities of the sides above. Night lighting has been made an integral part of the structure so as to keep the brilliant blue color equally effective both night and day. The 195-foot derrick at one side will demonstrate rotary drilling*

# • • • COME TO THE FAIR.

EVEN THOUGH the stream-lined tips of World's Fair buildings brush the clouds, and even though their sophisticated walls stretch to the horizon, it is not enough if they do not also awaken and satisfy the joyful anticipation that fair-goers of all times have put into the words of the old ballad. The simple lilt of fun that vibrates in these four short sounds is wrapped up with one of the lusty moments of pure joy in man's life. Thirty-niners will not trade and barter, or buy and sell, as did their forebears who first sang the song, but they look forward with no less anticipation to the display of goods, processes, and the spectacle of entertainment. If they fail to come away humming the equivalent of the age-old refrain, the designers and exhibitors may be said to have failed in their prime purpose.

*The World's Fair is not the place for Architecture in the strictest sense of the word. The serious things should be over and done. Each building should be keyed to strike the same breath-taking pitch with which the first gay strains of the scherzo movement of a symphony pierce the hushed air. It is the time for novel effects.*

Nowhere is it clearer that an architect's duty goes far beyond supplying his client with a good set of working drawings. Although the general tendency of World's Fair buildings is to approach the form of a shed, they are still far from being a mere shelter for a display; and in the finest instances emerge as the most important part of the machinery of display. Unless the program of the fair itself limits the quality of the structure to a predetermined line, as it did in the Stockholm Exhibition of 1930 which definitely restricted its theme to the benefits of militant functionalism, this is not other than it should be. Architecture can be display; and display can produce good and stimulating architecture.

It would be a fruitless task to try to convince an exhibitor that a good building in the architectural sense alone will fulfill his needs at the fair. The spectacular aims that motivate the exhibitor's desire to participate in the fair are the mainspring of the design. More than often it happens that he has not made a choice of what he wants to present or how he wants to do it. Assistance in the selection of these elements and their dramatic presentation become the architect's first duties. Few architects are qualified to solve all these problems themselves. Other designers must be called into collaboration. The unlimited vistas such freedom offers to the powers of an imaginative designer under sympathetic architectural guidance are evident. Once they are determined, the structure to support the spectacular features easily takes its place in the design. Failure to take advantage of these possibilities probably will result in a mere shed, and the man with " . . . come to the fair," on his lips will know he has been let down.

The series of studies shown on these pages illustrates how these problems have been attacked in the instance of the Petroleum Industry Exhibition, Inc. The building is an open shell that gives a kind of three-dimensional welcome. A man enters its shady bounds or leaves as he chooses, since no doors bar his path. He wanders as he pleases and sees how many ways Petroleum touches his life, by means of still and animated spectacles on the inside of the shell. Dramatic and novel effects are emphasized in the production of all displays, just as the spirit of fun and novelty trickles through the form and structure of the shell. Nothing is forced on the visitor; nothing is urgent. The only hope is that he will be impressed to remember that the Petroleum Exhibit was a pleasant place, as he whistles " . . . come to the fair," on his way.

Institutional

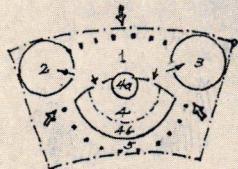
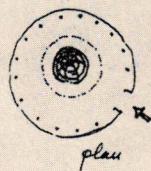
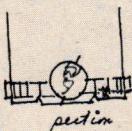


Diagram 8  
plan.  
(no scale)

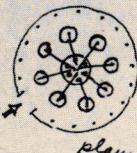


plan



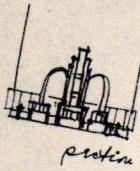
plan

1. The Hall of Petroleum: devoted to the thirteen companies, a simple dignified room, in which, in a few words, the purpose of the building is the cost of the production and sale and feeding the gasoline to the... Mural chemists etc.

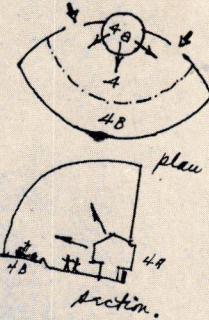


plan

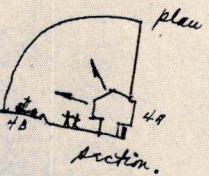
2. The Hall of a circular globe showing oil reserves by whom of products etc. and to science accom devel Eval reso



plan



plan



plan

3. The Fountain of Miracles: a circular room in the center of which a large glass fountain recirculates crude oil. from the fountain six great tubes carrying oil reach out to revolving drums on which the products of petroleum are shown.

200  
to  
mms

4. A world with out friction: Idea, a "telesis montage"; Room a great ex-dial (see 4 a) on diagram; a monte with a battery of moving picture projectors, two at least wide angle or one electric mount. The "telesis" partly in Black and white and partly in both color and monochrome, all as nearly as possible without background.

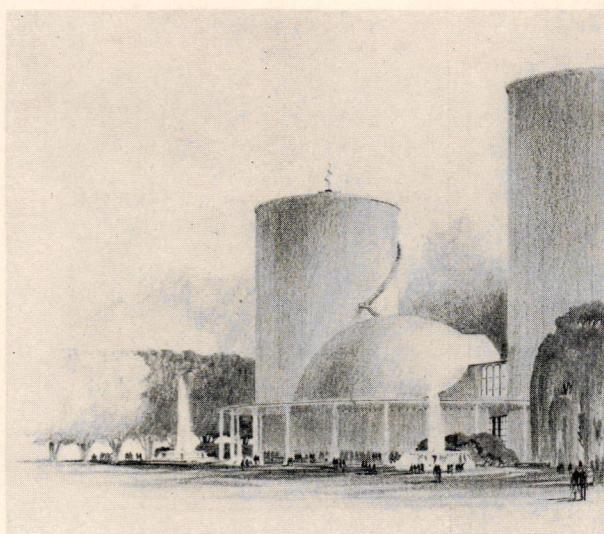
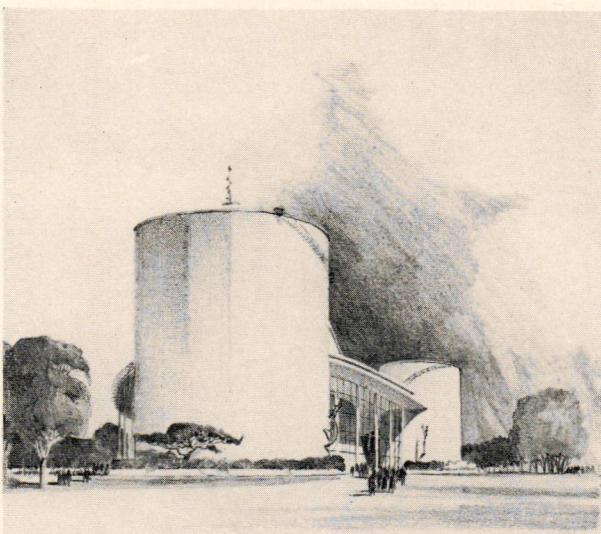
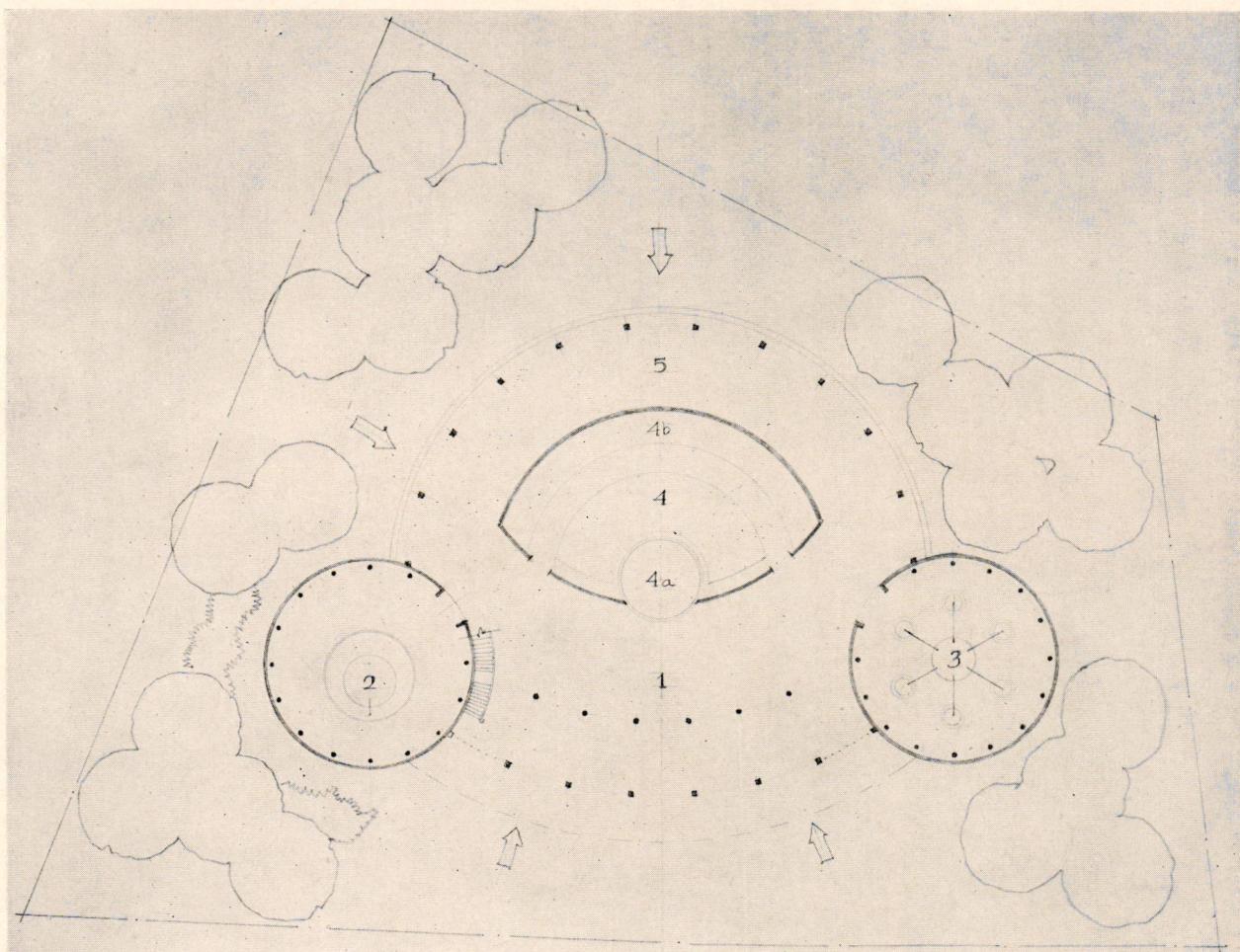
Power—Speed—oil.  
(a single scenario); a great procession of man made instruments of work and travel, from work breaking slowly to fast moving trucks; from small drawn

speed  
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names  
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be shown  
mms. (as  
agains)

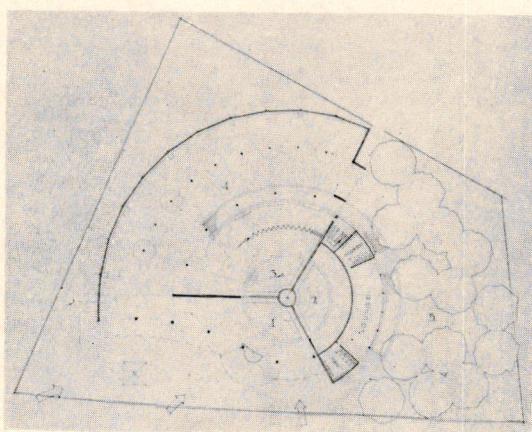
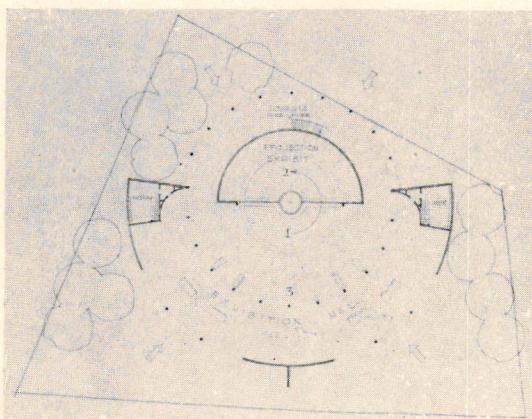
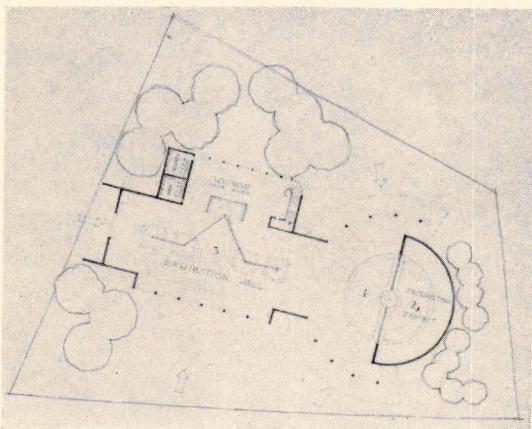
5. Colmado offering shade and cool water.

6. The Petroleum Club: space above 1, 2, and 3. (see diagram).

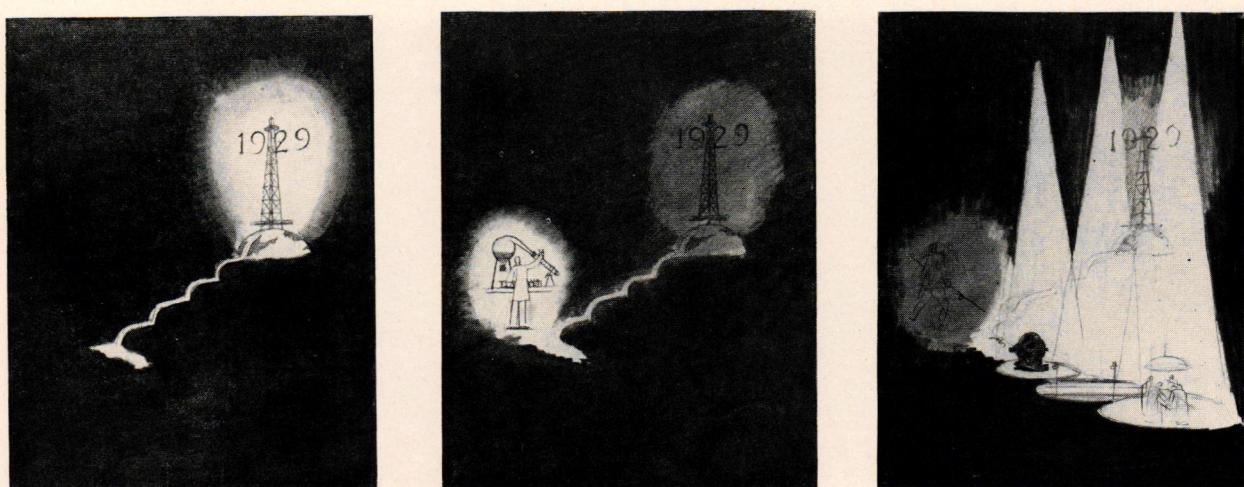
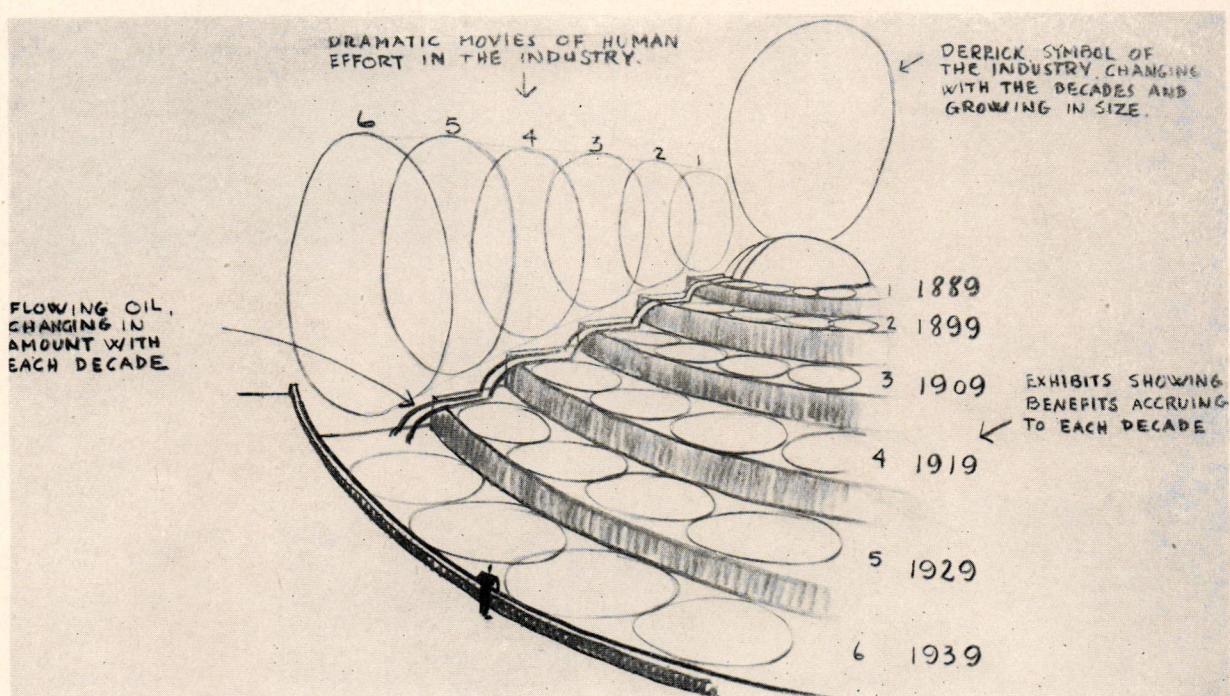
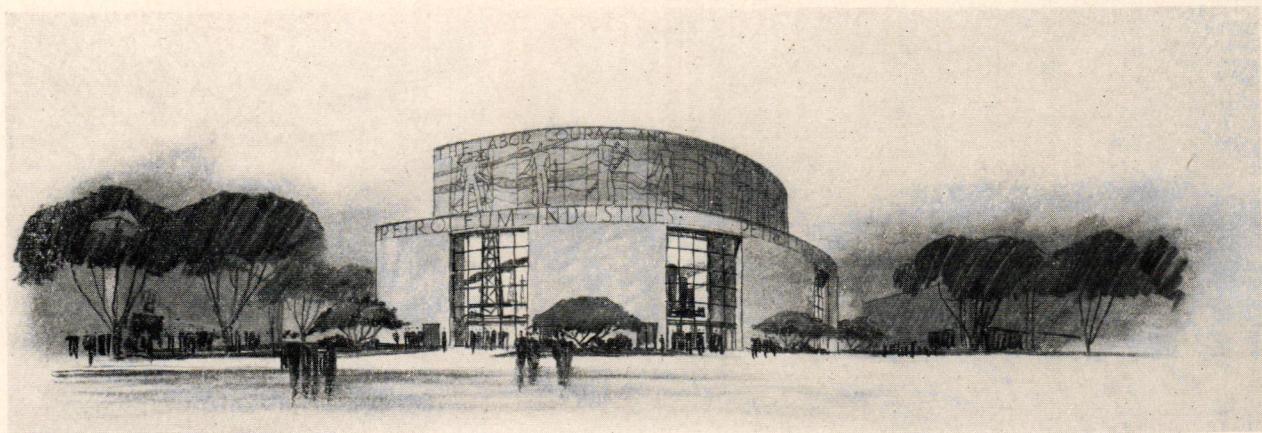
The germ-plasm of the exhibition center for the Petroleum Industry Exhibition Inc. was developed from the three short pages and the rough sketches shown above. These formed the first attack on a display problem whose wide scope and varied details made the choice of emphasis very difficult for all concerned. The clarity of the exposition of the problem and the indications of the solution on the above notes have served as a guide during later developments



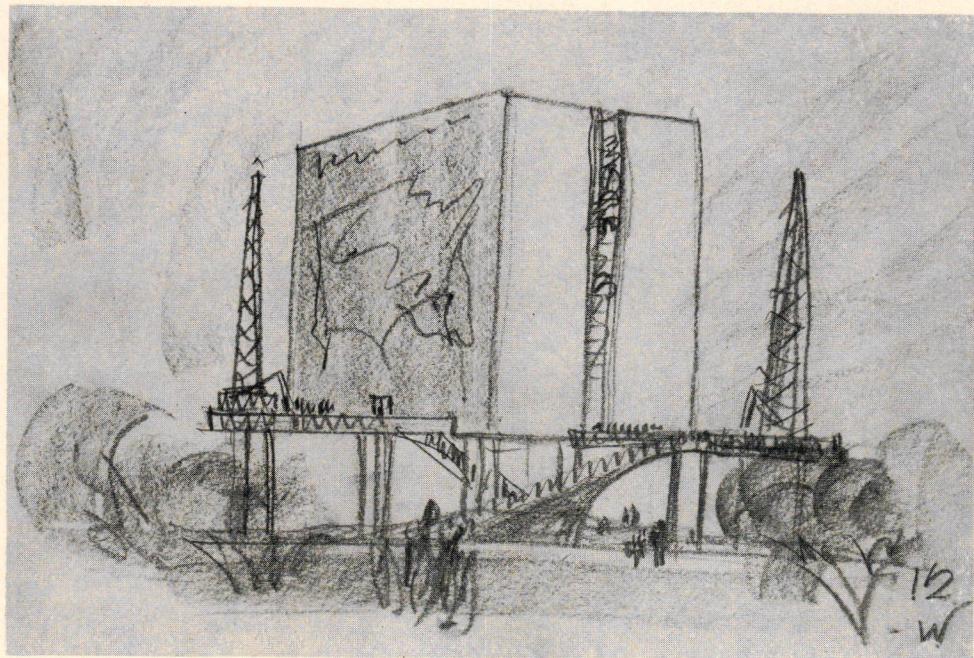
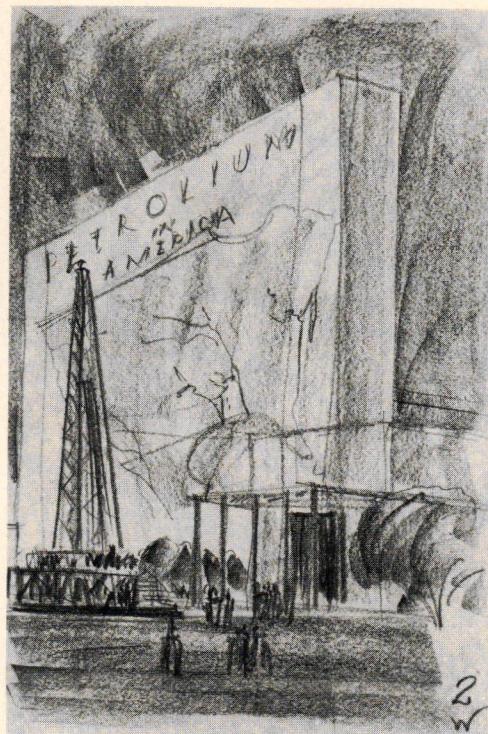
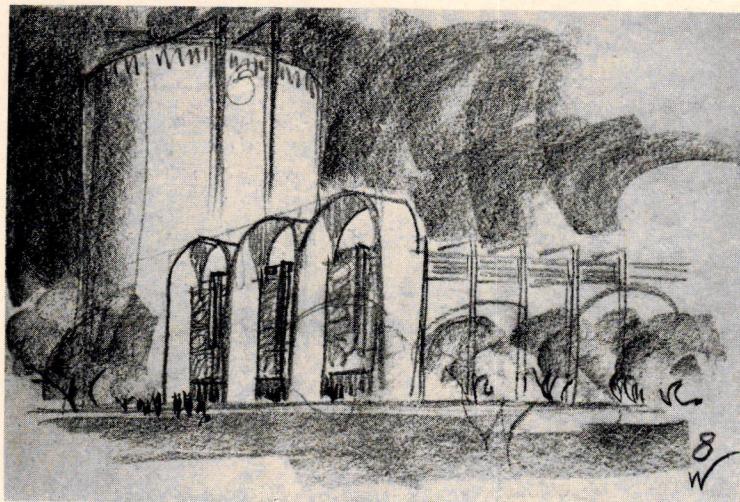
*The ideas set forth in the first program proved a feasible solution in many respects. Oil storage tanks and the domed focal exhibit center made a building of potential interest. Its greatest value lay in the other aspects of the problem it drew to attention. As point after point was taken up, and new ideas were injected, the conception began to grow and assume other shapes. Architectural form and detail changed as study revealed the needs of the display involved*



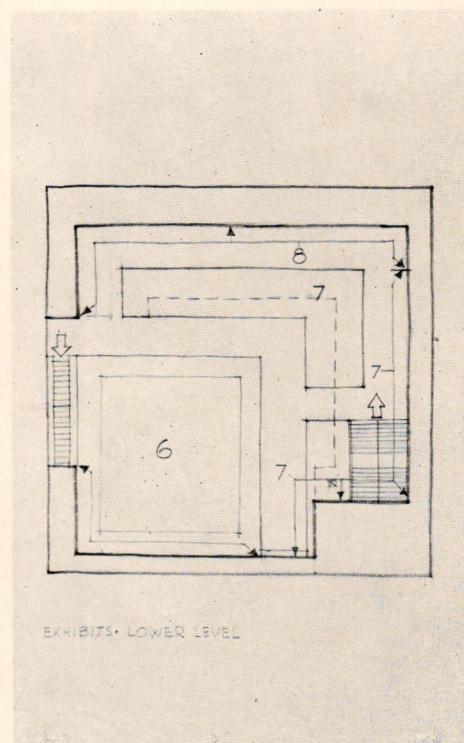
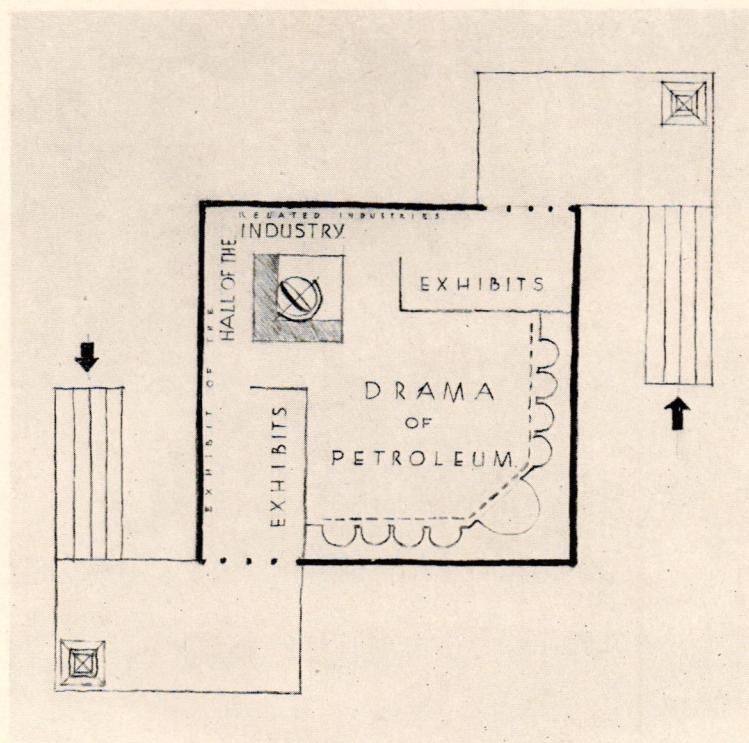
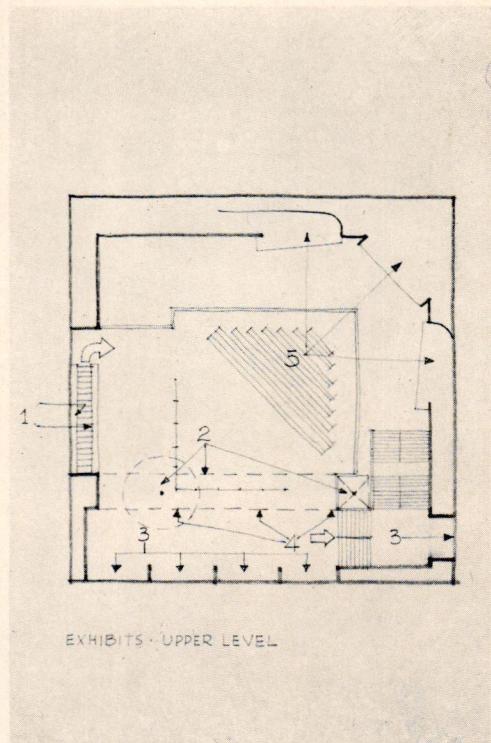
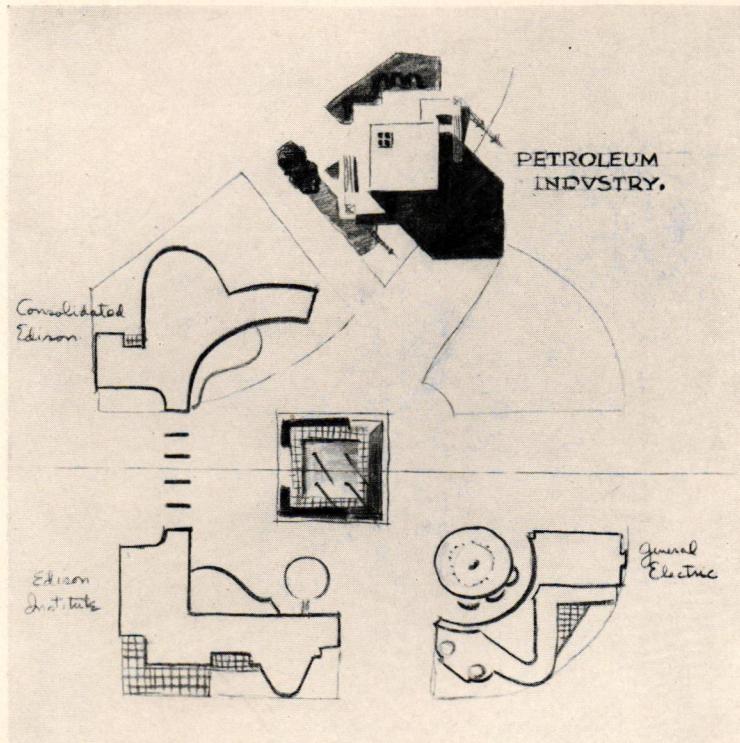
A diligent search for unusual and spectacular forms for the elements outlined in the program led to the variations in arrangement shown above. The size and position of the essentials on the lot was most carefully considered. The tanks were dropped. The technical apparatus, required to make the exhibit effective, expanded the building until it almost filled the lot



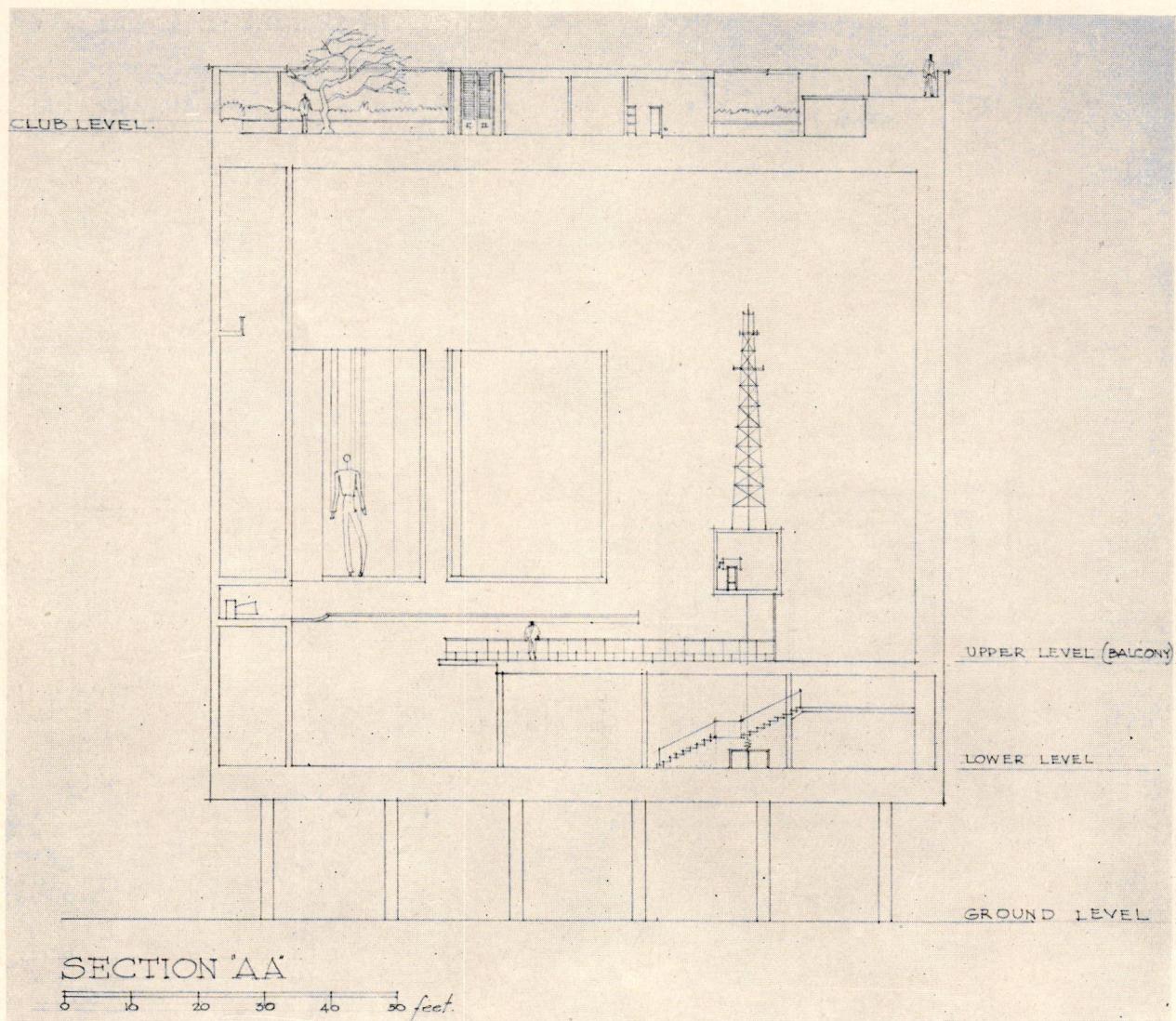
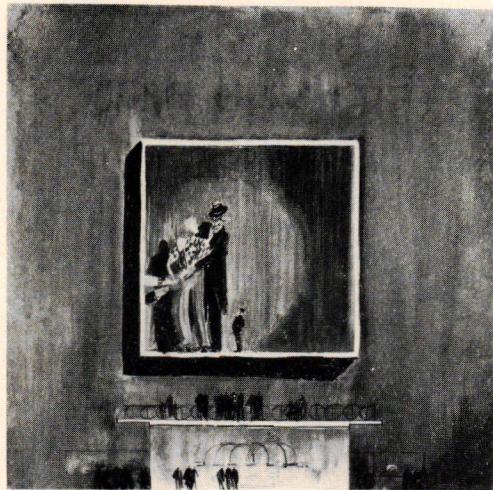
A shadow show of the development of the use of oil made a striking departure for one focal scheme. Building structure had been very much subordinated to the display material. From this point on, the effects to be achieved and the manner of the presentation continually added energetic features to structural design. The building merged more and more with the display



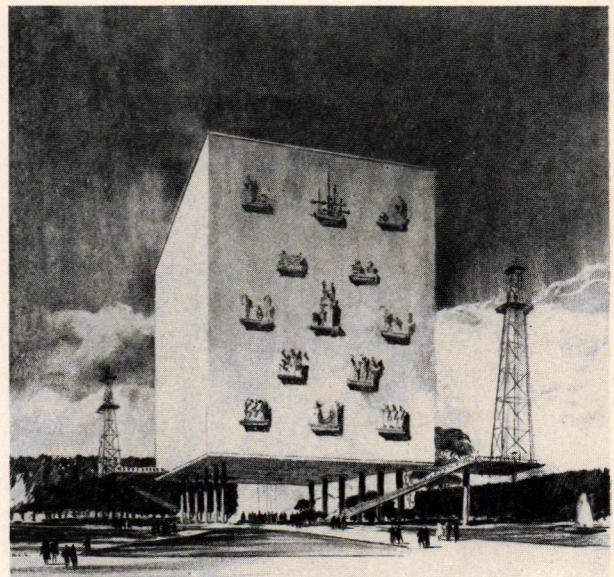
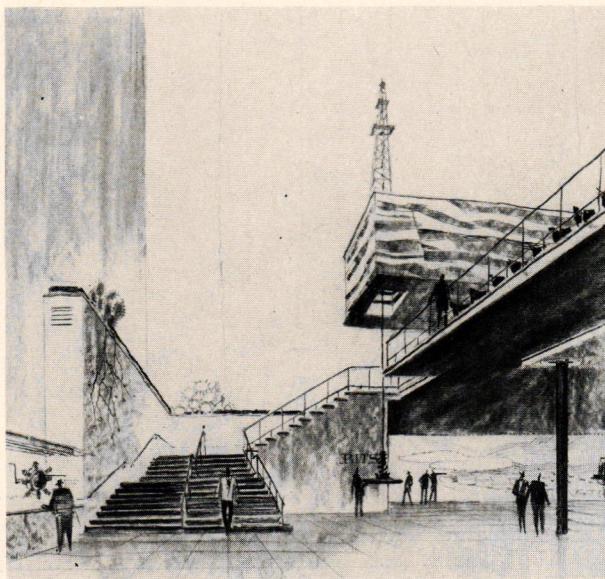
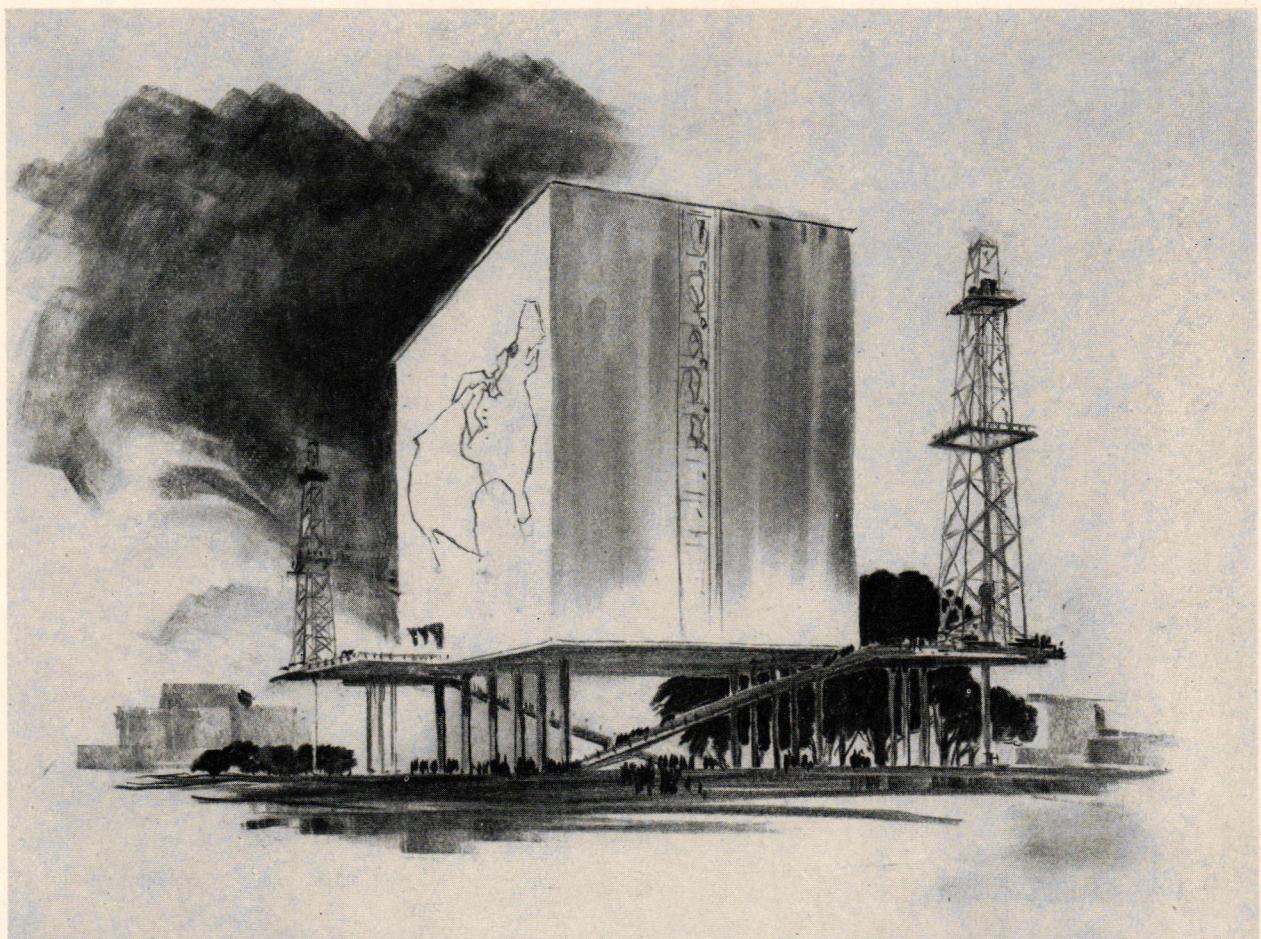
Large storage tanks and refining machinery disappeared after the sketch in the upper left corner. The billboard and derrick in the upper right are easily seen to be closely related to the cube-on-stilts sketch below. The novelty of a 100-foot cube, 20 feet above the ground, flanked by derricks, made an arresting thought as a picture for a Fair building both from a structural and display standpoint. It was filled with many imaginative and practical possibilities.



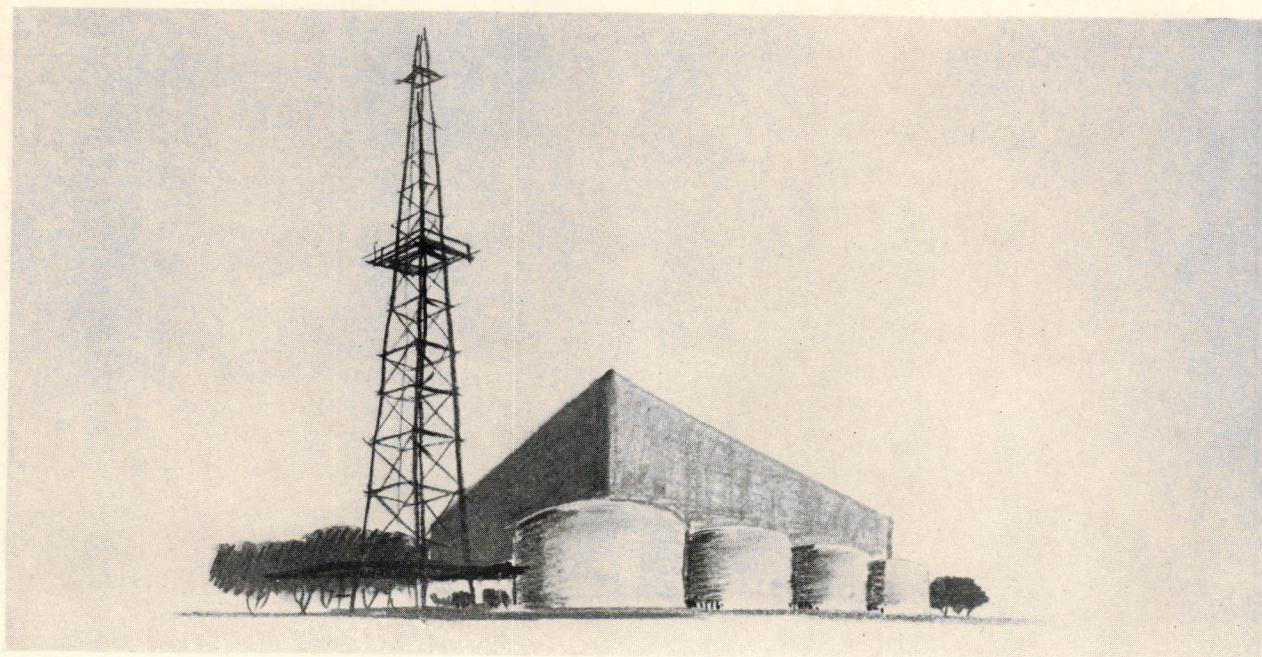
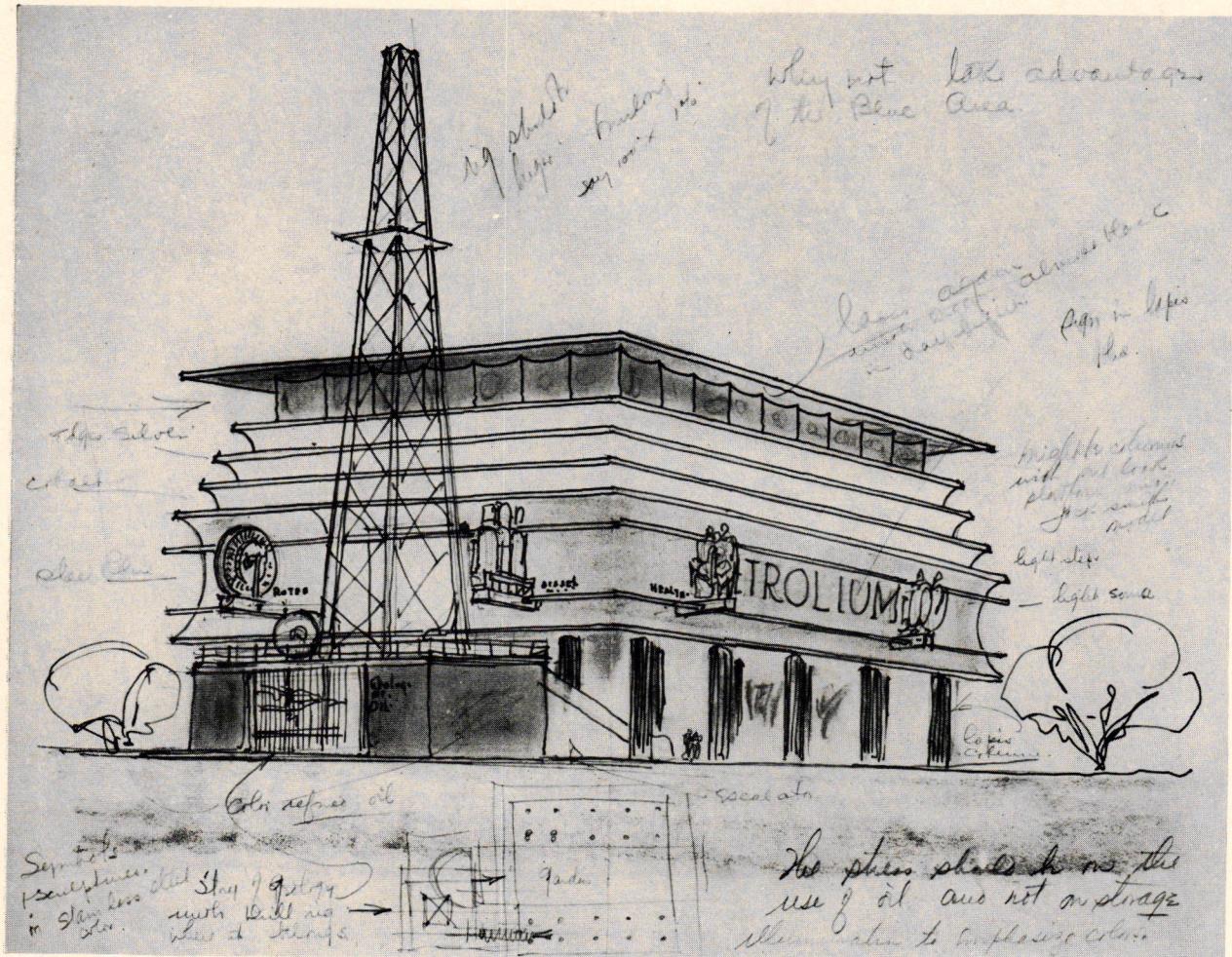
Not only the situation on the lot and the position among the neighboring buildings, but the framework it offered for striking displays on exterior and interior, made the cube-on-stilts scheme the first one that completely unified all the architectural and display elements which composed the problem. By gradually breaking the spectators' contacts with the usual as he ascended into the cube, the dramatic impression was to be subtly but effectively increased



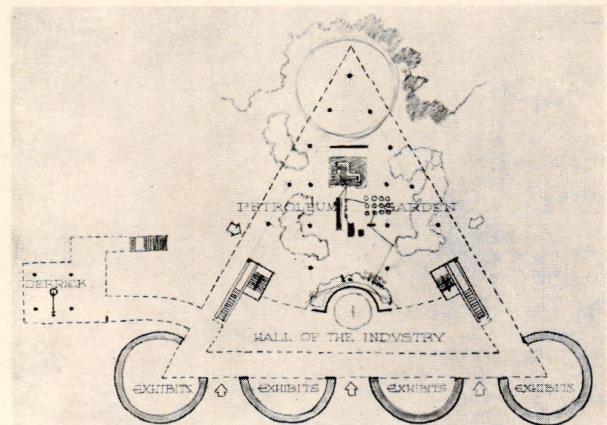
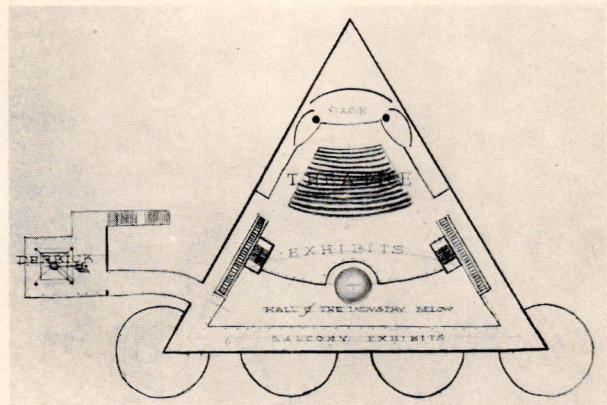
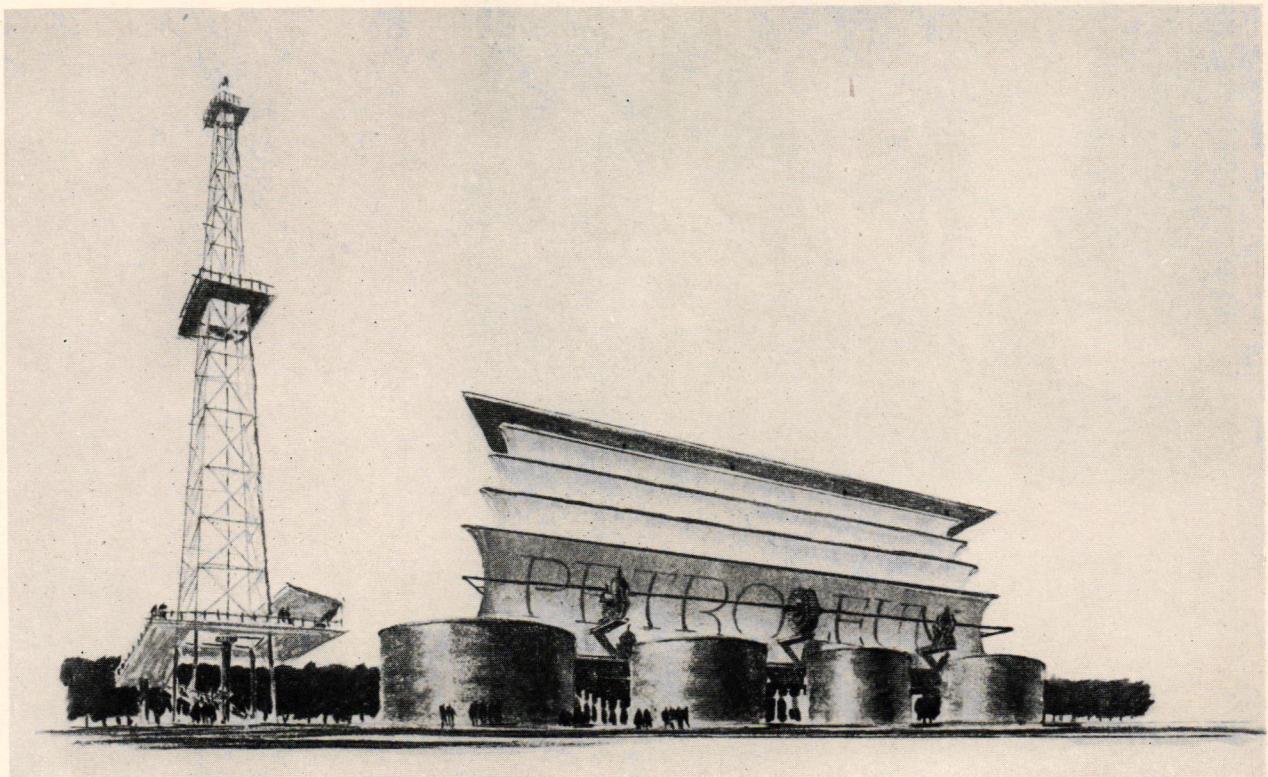
*The interior walls of the cube offered unlimited opportunities for short spectacular displays of all kinds with the freedom of dramatic effect that modern stage and lighting technique ensures. Marionettes, human actors, movies and other kinds of projection demonstrations were to be utilized in helping to display how oil has affected the course and trends of our civilization*



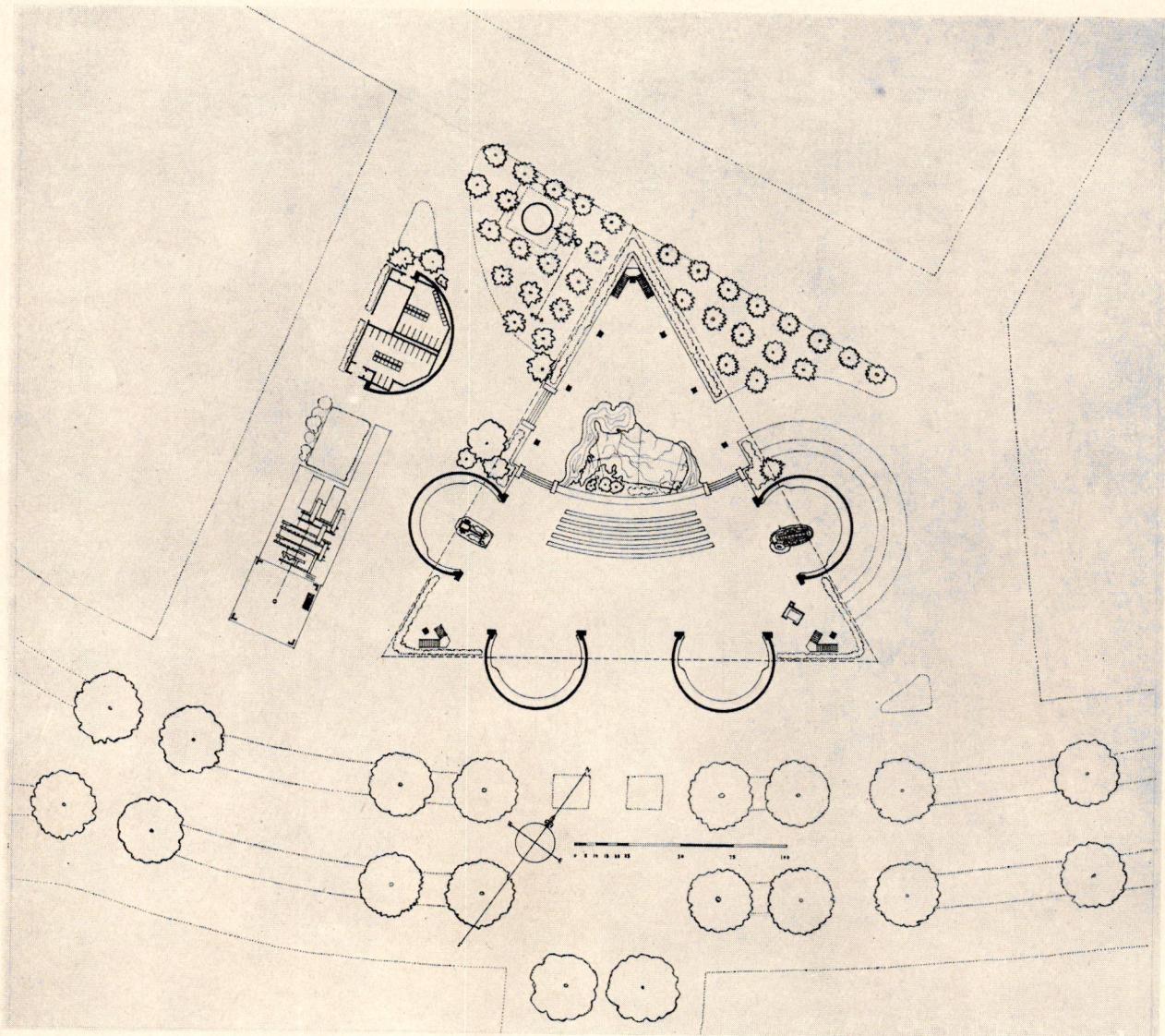
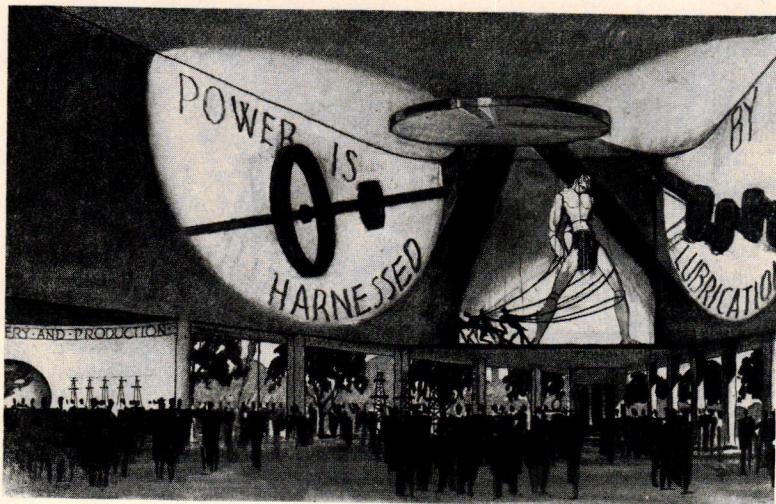
*Escalators were part of the scheme to carry the crowds to an outside level on which derricks were raised as symbols of the Petroleum Industry. The spacious stairs and platforms inside the cube offered a constantly changing panorama of scenic and technical effects. The World's Fair Design Board considered the cube too large, its surfaces overpowering and rejected it*



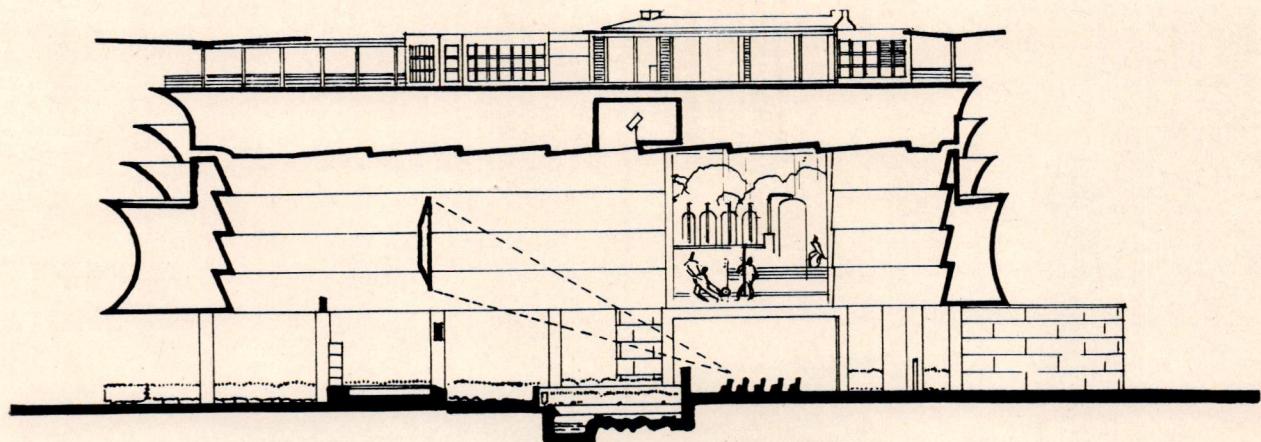
In an attempt to meet the criticism of the World's Fair Design Board, two sketches were made that resulted in the final solution. The first, above, showed a wall treatment incorporating color and lighting as part of the cube's surface structure. The second, below, reduced the cube to an equilateral triangular prism supported on small replicas of tanks. The derrick was retained



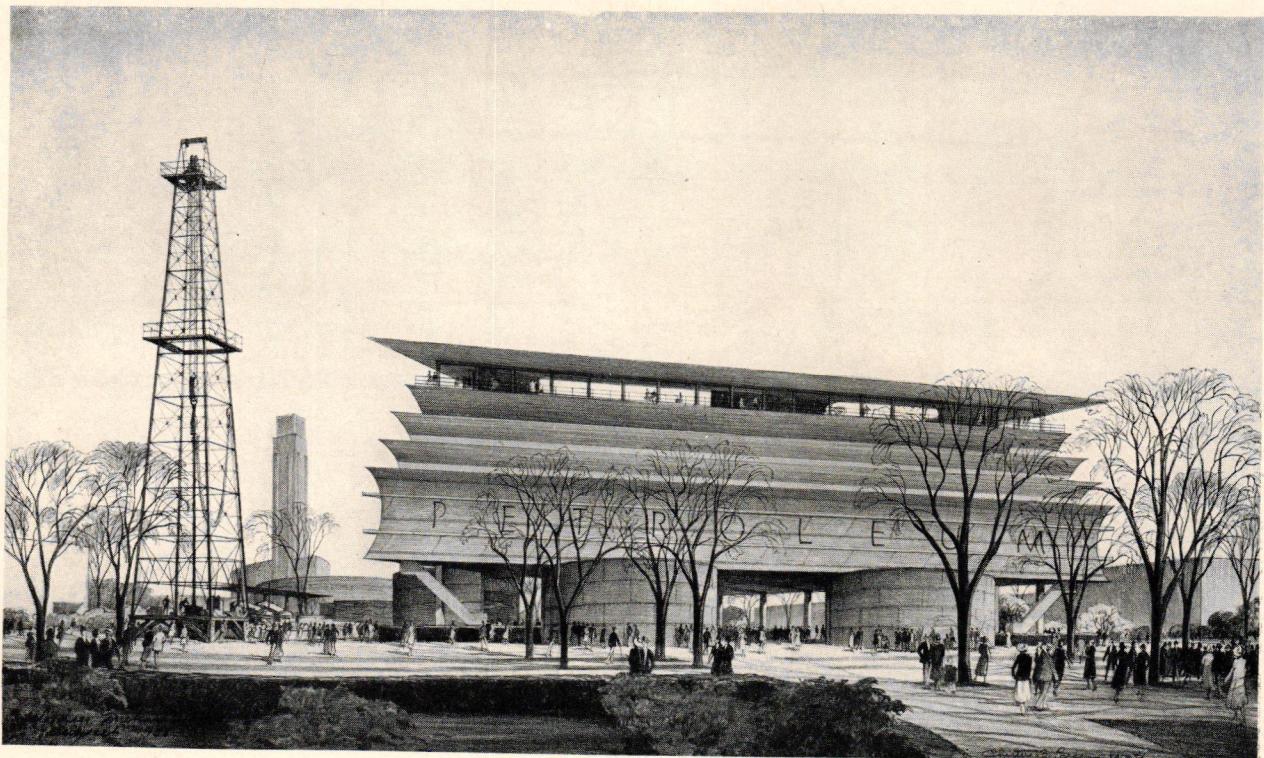
Combining the features of the two previous sketches, the triangular form, the concave wall treatment, the tanks and the derrick, gave the essentials of the building to be built at the Fair. Removal of all kinds of public vertical circulation, mechanical or otherwise, finally made the ground floor the floor of the main hall, inviting the visitor to enter. No barriers were permitted



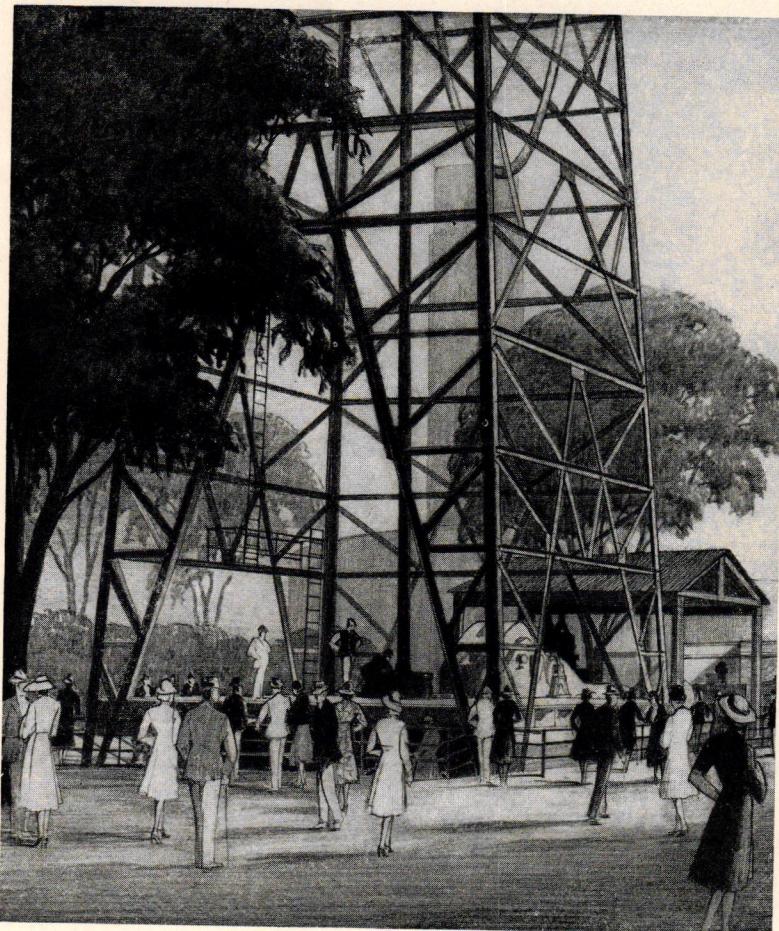
*An enticing shade and easy access into it from all sides are novel points in the design. A principal area of the main floor is devoted to an animated relief map of the United States, showing the activities of the Petroleum Industry in miniature. Oil fields, refineries, pipe lines, tankers, and trains will dot and move across its surface. The interiors of the tanks will house other detailed technical displays depicting every-day relations of the industry with the average man*



The feature of the great hall, whose ceiling is 60 feet above the ground, is a central screen. Theatre seats are provided for those wishing to witness the performances of marionettes and movies, at stated intervals. Standers and wanderers are at liberty to come and go without bothering the other spectators. At no time is a visitor forced to walk down a restricted path where he is hedged in by unbroken walls or displays as in the conventional exhibition building.



*Two drawings by Chester B. Price of the building being erected on the grounds of the New York World's Fair*



VOORHEES  
GMELIN  
WALKER  
ARCHITECTS

THE PETROLEUM INDUSTRY EXHIBITION INC.

# COMPETITIONS

BY TALBOT F. HAMLIN

A NEW sentiment in favor of open architectural competitions has during the last two years been growing rapidly. It has at last achieved important results, in both public and private work. Wheaton College started the ball rolling; it was followed shortly by the federal government, with a surprising reversal of its former attitude. The Treasury Department announced two competitions—one a façade composition for typical small post offices, the other for a post office and federal building at Covington, Ky. The results of the Wheaton College competition (conducted jointly by The Architectural Forum and the Museum of Modern Art) and the first of the government contests have already been announced. At the present time, Goucher College also has a competition under way—not, to be sure, entirely open, yet in its extended list of approved competitors quite different from the old "invited" type of competition. Thus, I hope, a beginning has been made, and the results already show that the architects of America are competition-starved. Some 250 sets of drawings were received for the Wheaton College competition, and over 1,000 for the first of the government contests.

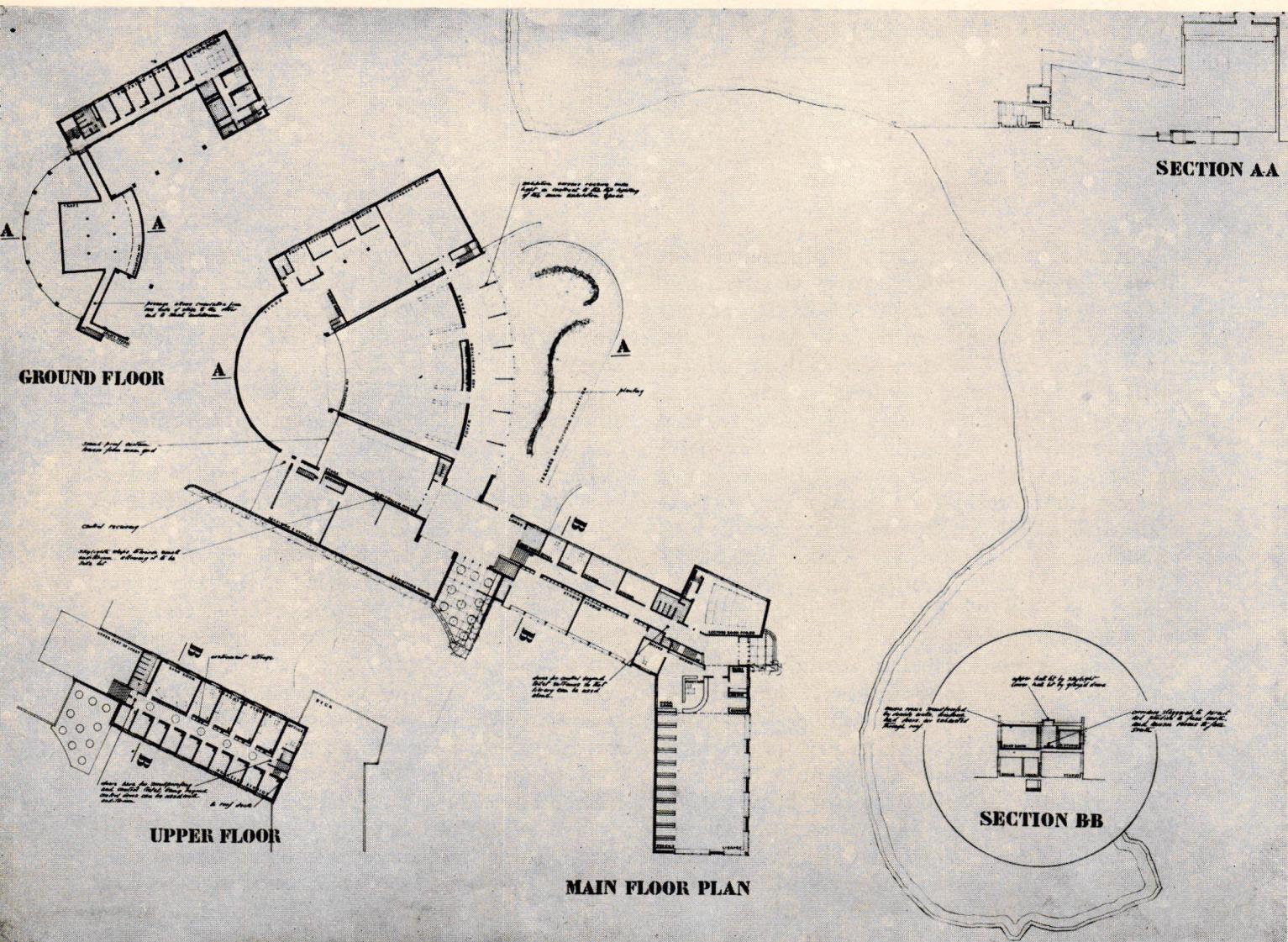
This flood of drawings is, of course, in a way absurd. Excellent arguments can be made against a system which produces such an enormous amount of work that is, seen superficially, waste; and yet the reason for this large number of contestants is to be sought, not in the system itself, but in the current building depression, on the one hand, and the lack of more competitions, on the other. If open competitions were relatively as common in this country as they are in several countries abroad, the list of competitors for each would be vastly diminished. Many of the younger firms, for the first time, found in these competitions an opportunity to show their mettle; is it strange that they took advantage of it? It is possible also that, if the system is carried on—as I hope it will be—some method of regional selection of competitors, except for the largest and most important work, may eventually be found advisable, not only to decrease the number of drawings which must be judged, but also for the sake of the local de-

velopment of the architectural profession itself. This was much in the minds of the members of the National Competitions Committee, in their campaign for federal competitions; their general idea was that in the case of all smaller federal buildings the competitions should be limited to architects practicing in the state or region where the building was to be situated, and only in the larger works was the competition to be nationwide. All of these questions will have to be settled by experiment; the results of these two open competitions prove, at any rate, that many architects are eager for them. They show, too, that one result of an open competition system is the fact that new names and new talents have come to the fore, and that in almost all the premiated drawings there is a definite attempt at architectural invention and progress.

I think it may be accepted that, for this reason alone, these two competitions have been worth while, and that they have succeeded in letting new light into the conventional architectural picture, more than anything that has happened in the architectural world in America for a long time.

\* \* \* \*

The Wheaton College competition had a peculiar program and a difficult site. A building of small cubage, to hold many functions, was asked for, and special mention was made of the fact that it must be both contemporary in feeling and also in the closest harmony with its location. A study of the drawings exhibited revealed at once the variety of approaches which were possible. The jury report makes it quite clear that they felt they were not selecting a design to be built, but designers to work out an eventual solution, which might or might not have anything to do with the solution shown in the drawings. One can approach any complex problem from either the general or the particular point of view; that is, whether as a whole a design is organized successfully, or whether its details are carefully worked out and then, as it were, added together. There are successful designers who work from the one point of view and others who work from the opposite, but it is only the genius who works from both points of view

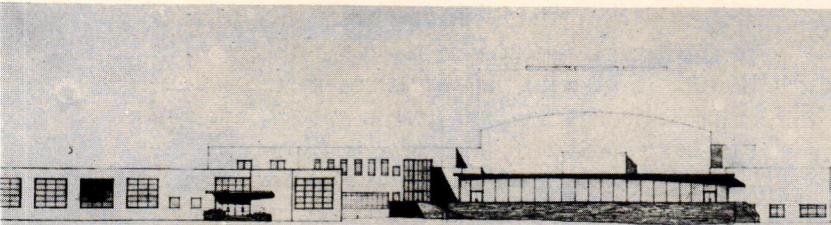


## AN ART CENTER FOR WHEATON COLLEGE

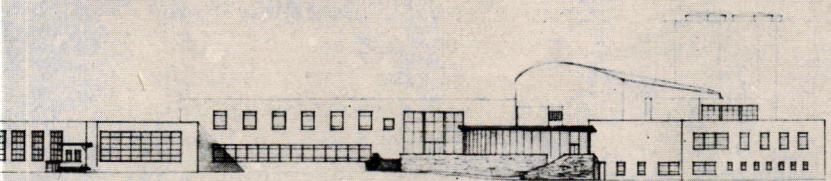
at the same time. Juries are probably similar to designers in this respect. A jury working from one point of view might bring in an entirely different verdict from an equally good jury working from another point of view. This is particularly true in the case of the Wheaton College competition, where the elements of site and of problem were so complex.

This jury, according to its own report, made its choice on the basis of five elements: (1) use of site; (2) suitability of the building in size and character; (3) relations of the principal parts; (4) ease of circulation and control; and (5) provision for the needs of each department. There is one other important architectural quality, which the jury might well have considered, that is not mentioned in this list—the power of composition; that is, the ability to take a complex problem, analyze it into its simple forms, and integrate the result into a clear, logical, and beautiful unit. Work-

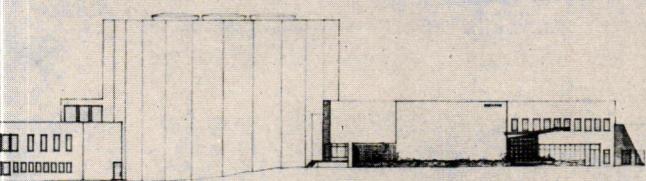
ing on the basis which it chose, it is difficult to see how any other result could have been arrived at than the solution chosen—for undoubtedly it does make beautiful use of the site; it is one of the few problems exhibited which, in size at least, seems within the bounds of possibility for the problem; and its parts have a simple and easy relationship, with ample and direct circulation. As in many of the other drawings, there is difficulty in the connection of the drama school with the rest of the building; the stage arrangement has been severely criticized, because, although both auditoria make use of the same stage house, it would apparently be necessary to strike any scene used for either auditorium when the other was being used. The exterior of this first prize design is manifestly, as the jury states, "unorganized." The large mass of the auditorium overwhelms the lower blocks at the side, and the whole sits but awkwardly



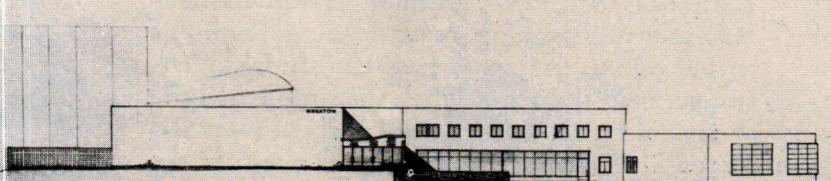
ELEVATION A



ELEVATION B

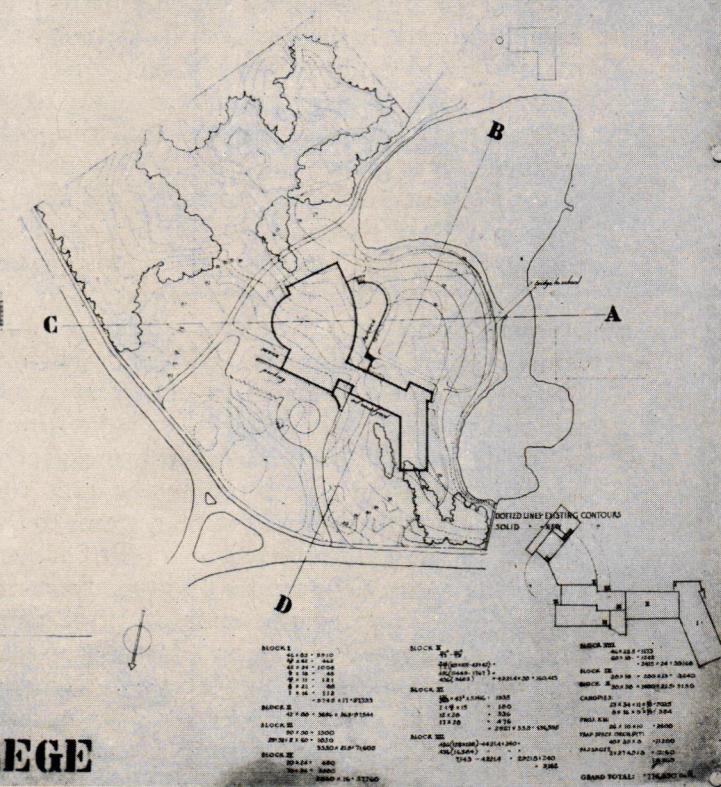


ELEVATION C

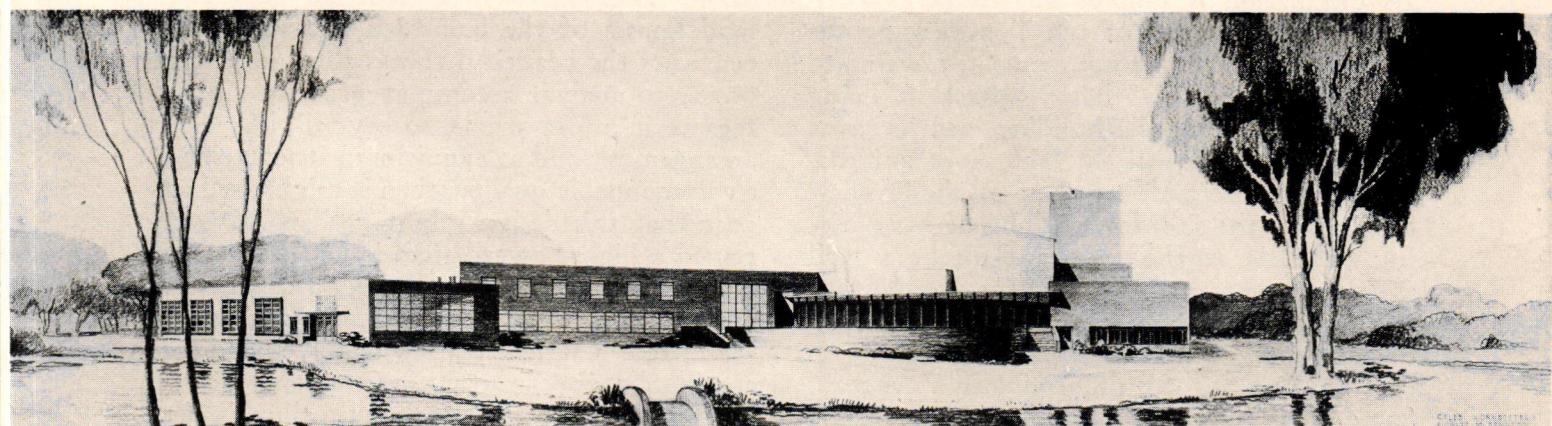


ELEVATION D

## AN ART CENTER FOR WHEATON COLLEGE



The design placed first in the recent Wheaton College Art Center Competition. Richard M. Bennett and Caleb Hornbostel were the successful designers. Their plan sheet appears on the opposite page. All drawings were photographed by courtesy of Museum of Modern Art



on the contours, with an erratic curved terrace to cover the difficulty.

The second prize design, by Walter Gropius and Marcel Breuer, is, as one might expect, a characteristic piece of International Style bravura. Whether such a design is suitable in size and in character to its location is a serious question. Certainly, on the face of it, the smooth rectangular surfaces of concrete, stone veneer, and glass seem to have little of the spirit that one associates with the Massachusetts landscape. The whole has many brilliantly conceived and beautifully detailed elements, and is planned with a severe imposed formality which has necessitated many sacrifices in the relation of parts. Thus, the glass-enclosed art gallery, with its ramps and screens, is magnificent, however difficult to heat in a New England winter; but the placing of the library on the upper floor, within this block, not only makes access to it extremely difficult and creates unsolved problems of library administration and delivery, but also somehow destroys the very unity which this block was designed to have. In exterior design, the beautiful sketch perspective and the elevations cannot hide the fact that all the clear formality of the plan seems to disappear in the exterior treatment. Fundamentally, the main view of the building from the college is a view of the ends of three completely different wings, seen edgewise, so that the whole from this point of view seems, at least to this reviewer, one of disintegrated parts rather than one of simple clarity. It is possible, I am sure, to design buildings as contemporary in spirit, as logical, as brilliant in their use of new materials, which shall have at the same time some deeper harmony with the spirit of New England scenery and some closer relation to New England college life.

The third prize design, like the first, is one of those in which there is the most compact interrelation of parts and in which the total size seems within the bounds of practicality. Its circulation is simple; but its general T-shape, with the end of the T projecting towards the present group, somehow seems to give the impression that its back is being turned. Moreover, the building and its great curved terrace crowd the lake shore unpleasantly and thereby destroy one of the loveliest qualities of the site. Its handling of car parking, deliveries to the stage, and public as well as student entrances is simple, and effective.

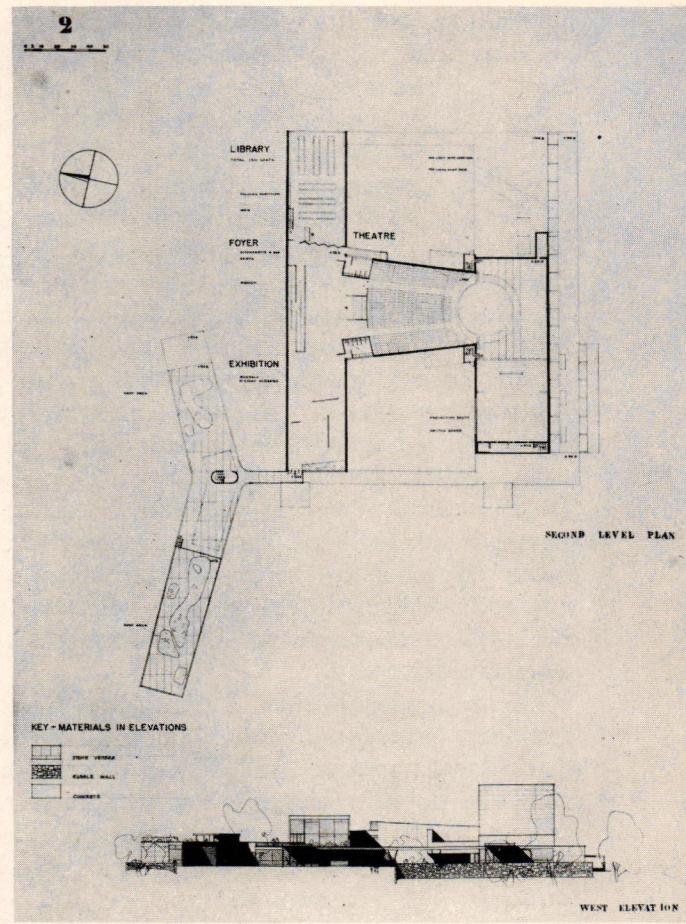
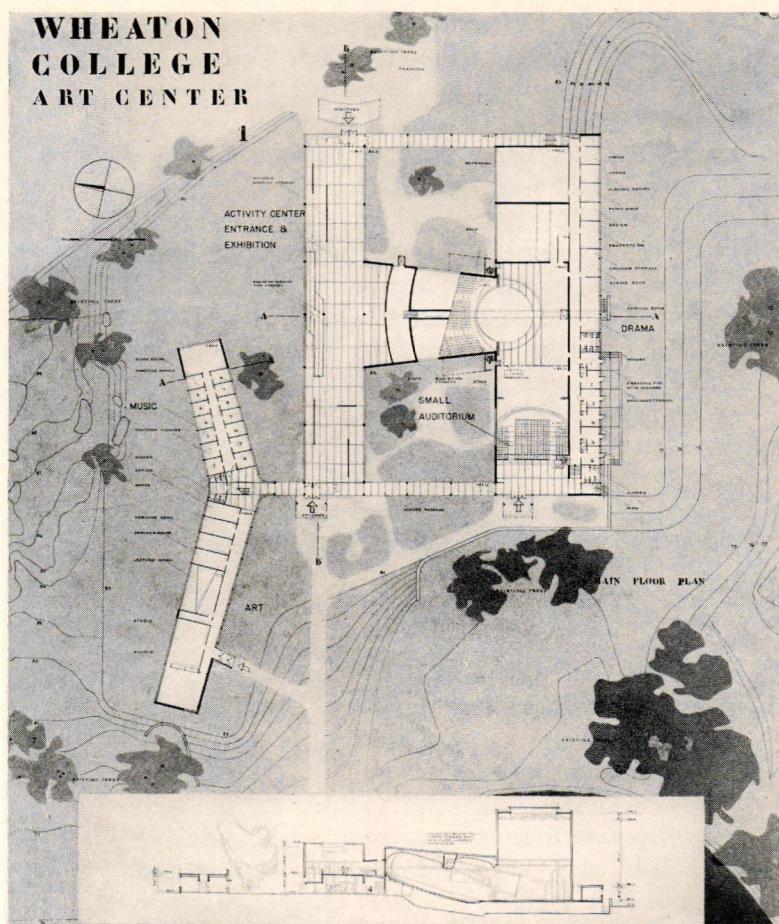
Of the other designs, Percival Goodman's is one of the most brilliant attempts to domesticate in America forms originally European. Some of it is obviously based on LeCorbusier,

and some of its details bear a great resemblance to the famous theater at Rostov-on-Don. The design, in general, has excellent interrelationships and organizes its drama school, art and music departments closely. Its library is excellent, and the entrance to the auditorium well handled. As an integrated whole, however, this suffers, like so much work of the International School, from an undue stressing of separate portions. Especially disturbing is the saw-tooth roof over the art studios. Manifestly, saw-tooth roofs give excellent studio light, and probably there is some aesthetically satisfactory solution of their treatment; however, as they are used here—sudden interruptions of the long horizontals of the rest of the building—they cannot but seem obtrusive and discordant notes. This design is one of beautiful parts, but of a whole which adds up to less than their sum.

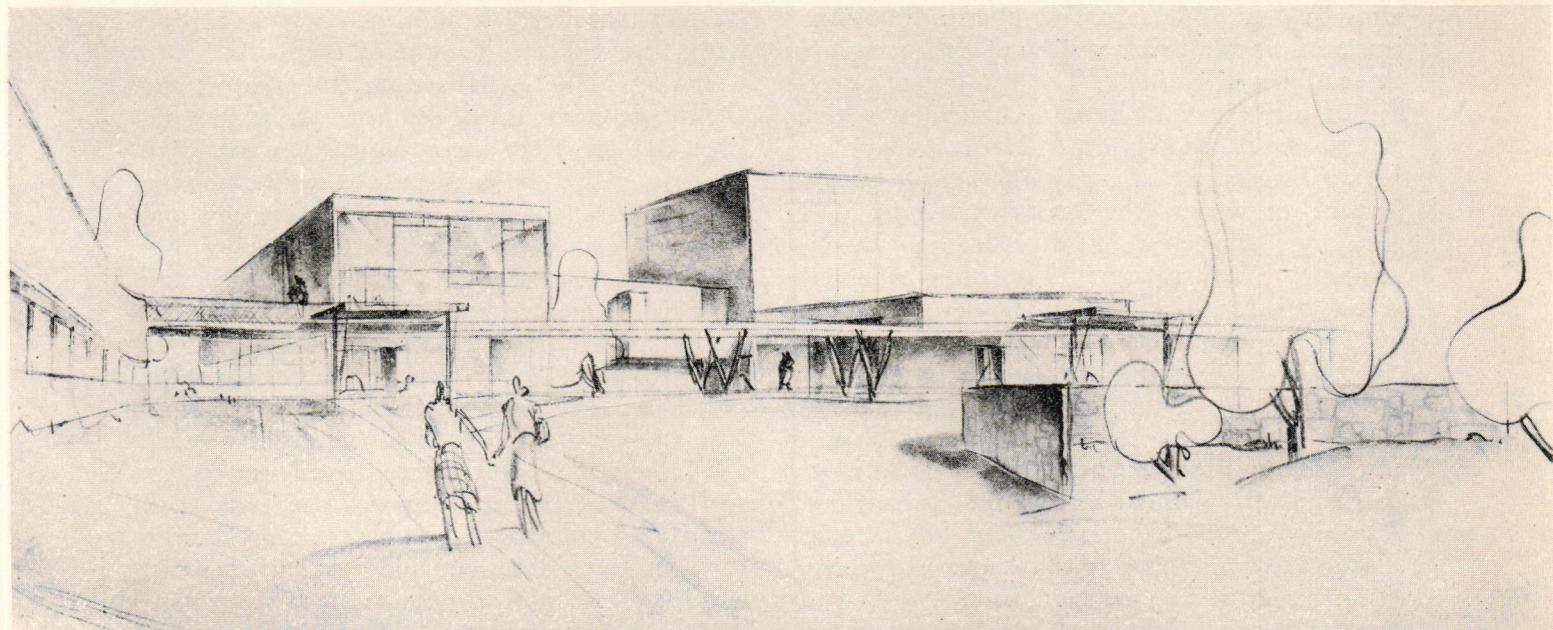
In the fifth prize design of the younger Saarinen, one is in a different world. Here it is the integration of all the parts in one, both in plan and elevation, which has controlled. It has that spontaneity and direct detail which come only with careful analysis and meticulous study. The long foyer leading from the ample public entrance, past the students' entrance, into the art gallery, the simple placing of the auditoria side by side, and the clear demarcation and organization of the various departments are all masterly. The parti is an extended one, and, in contrast to the compact solutions of the first and third prizes, it may have seemed extravagant; yet its basic simplicity of alignment is beautiful and direct. Only the wide separation of the music department from the library is questionable. The same clear, quiet simplicity, without tricks, is seen in the exterior, which is, to my mind at least, the most disarmingly simple and beautiful of any which were exhibited. This, surely, is a "modern" work; yet here, in its unforced loveliness of proportion, its direct use of materials, and its simple detail, there is something of the same spirit which made our New England houses of the late 18th and early 19th centuries the beautiful things they are. If the power to analyze a complex problem and integrate it into a whole, so crystal-clear in its arrangement and so exquisite in its exterior, is a commendable quality, then it might well appear that this design might perhaps have received a higher award than it was given.

Something of the same quality can be felt in the fifth prize design of Lyndon and Smith. Here, too, a simple clarity reigns, and direct corridors connect the various elements closely. The entrance to the little auditorium is per-

WHEATON  
COLLEGE  
ART CENTER



*The design placed second was that of Walter Gropius and Marcel Breuer formerly of the Dessau Bauhaus and now of Harvard's Department of Architecture in Cambridge*



haps confused in its relation to the rest of the building and not as direct as it might have been; but the west elevation, towards the existing college, is delightful, with its art studios built out over the entrance colonnade.

Of the other designs exhibited, those of Neutra and of Brauer, Lindsay and Rogers deserve special comment. The Neutra design places the whole group far to the south of the lot, thus creating the widest possible space between itself and the lake and existing buildings. It forms an attractive building with an ingratiating exterior, of simple masses and a lovely curved colonnade surrounding a protected court. Its arrangement of the stage house in such a way as to allow an outdoor theater is also brilliant, but the problem of the public approach to the main theater is solved only at the sacrifice of large areas of green and the concentration of great amounts of unnecessary driveway.

The design of Brauer, Lindsay and Rogers is entirely different. All on one floor, it spreads over a larger area of the lot than seems desirable. The public and student entrances to the various parts are somewhat confused, and there is little of that crystal-like clarity to be found in the Saarinen and the Lyndon and Smith schemes; yet the whole is so full of delightful, imaginative touches that one is tempted to overlook these questionable matters. Undoubtedly it would be one of the loveliest buildings to walk around and through, of any of those exhibited. Its attractive protected courts, its art gallery screens, its library wing, glazed on two sides, facing out on a protected pool and terrace—all these have imaginative beauty all too rare in American architecture. The exterior treatment has something of this same quality of imaginative charm. The contrasts of simple brick wall and glass areas are especially well handled. The whole has a feeling of intimate and humane loveliness which few of the other exhibited designs achieve.

It is interesting to study, in these Wheaton College drawings, the qualities which contemporary American architecture may be developing. There is strong European influence here and there, in almost all the designs exhibited. The second prize drawing is understandably of the Bauhaus type; Goodman's shows elements from LeCorbusier and from Russia; the Brauer, Lindsay and Rogers design owes many of the tricks which create its charm to Mies van der Rohe; and the Saarinen drawings are perhaps influenced by Dudok. The interesting thing is that, in all of these, these foreign influences have been modified in varying degrees; there is in them—especially in

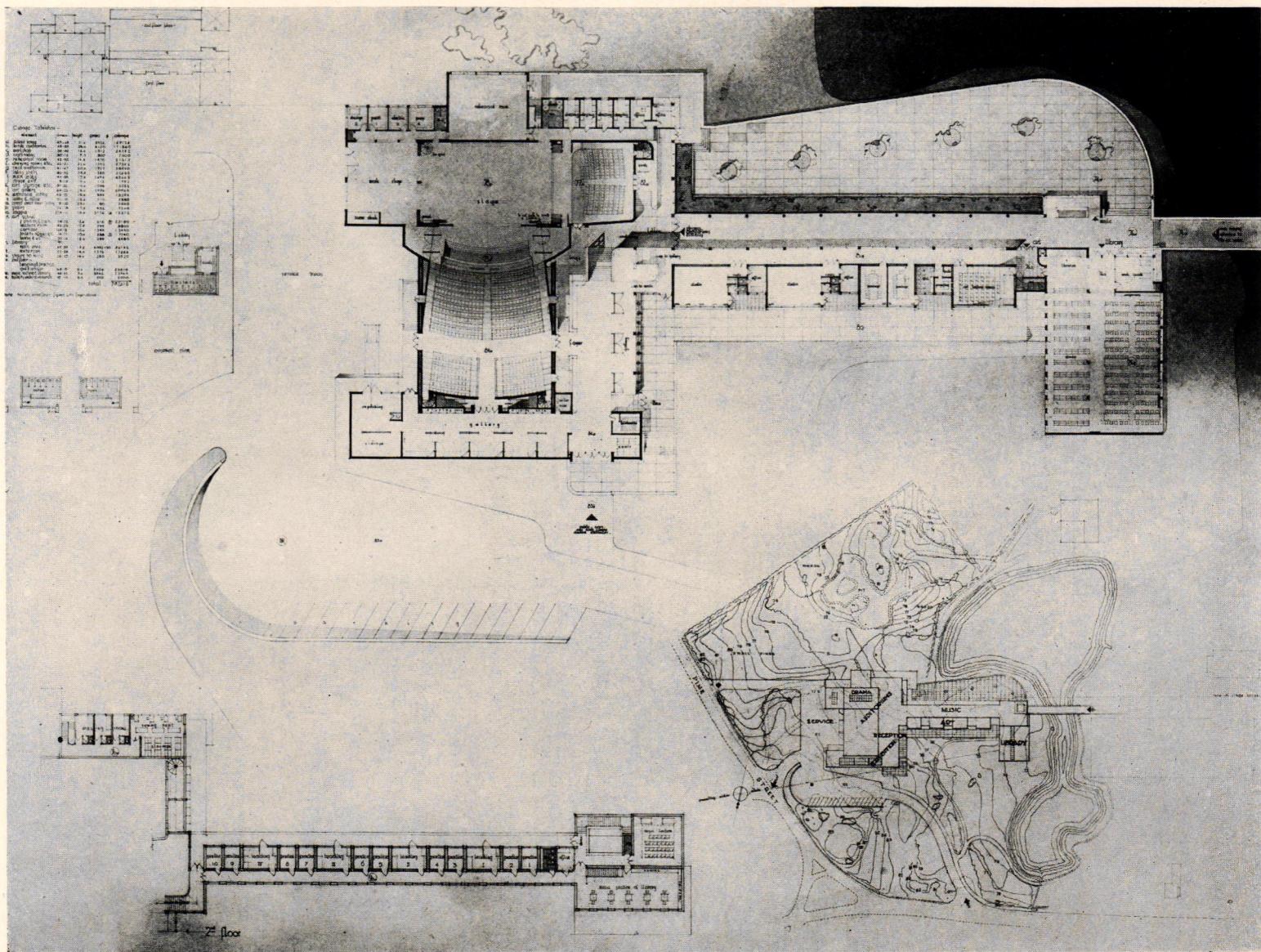
the designs of Brauer, Lindsay and Rogers, of Neutra, and of Saarinen—a search for proportion, for quietness, for restraint, that is not unlike the modifications which the European classic revival forms underwent in America a hundred years ago. Out of these modifications our American architecture of today is growing. We can never avoid influences from Europe, except at the cost of a romantic and artificial ignorance; yet that modern architecture is most our own, and therefore most "true," which is most sensitive to our own traditions of delicate simplicity, of quiet and unobtrusive restraint, of proportions almost classic—traditions which it seems to me have always been at the basis of all that was best in American architecture, past and present.

\* \* \* \*

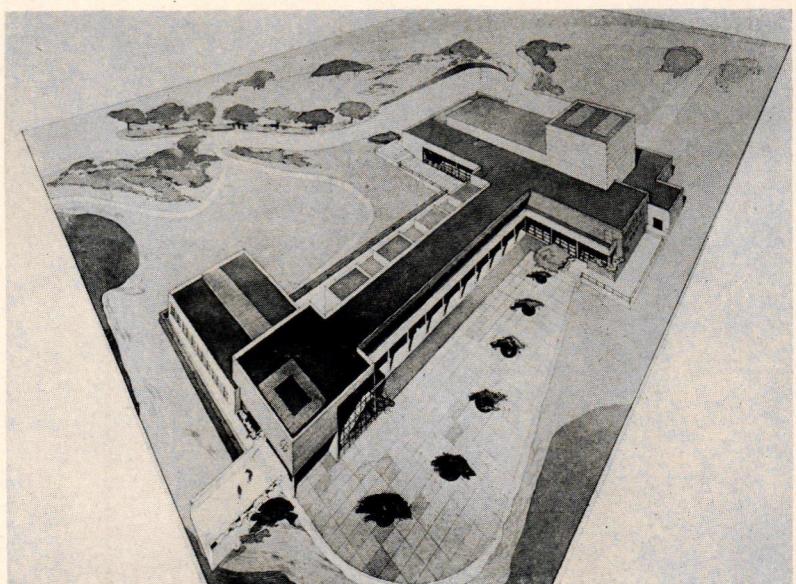
The results of the post office competition are in a way inconclusive. The very simplicity of the façade problem presented made it difficult both to design and to judge.

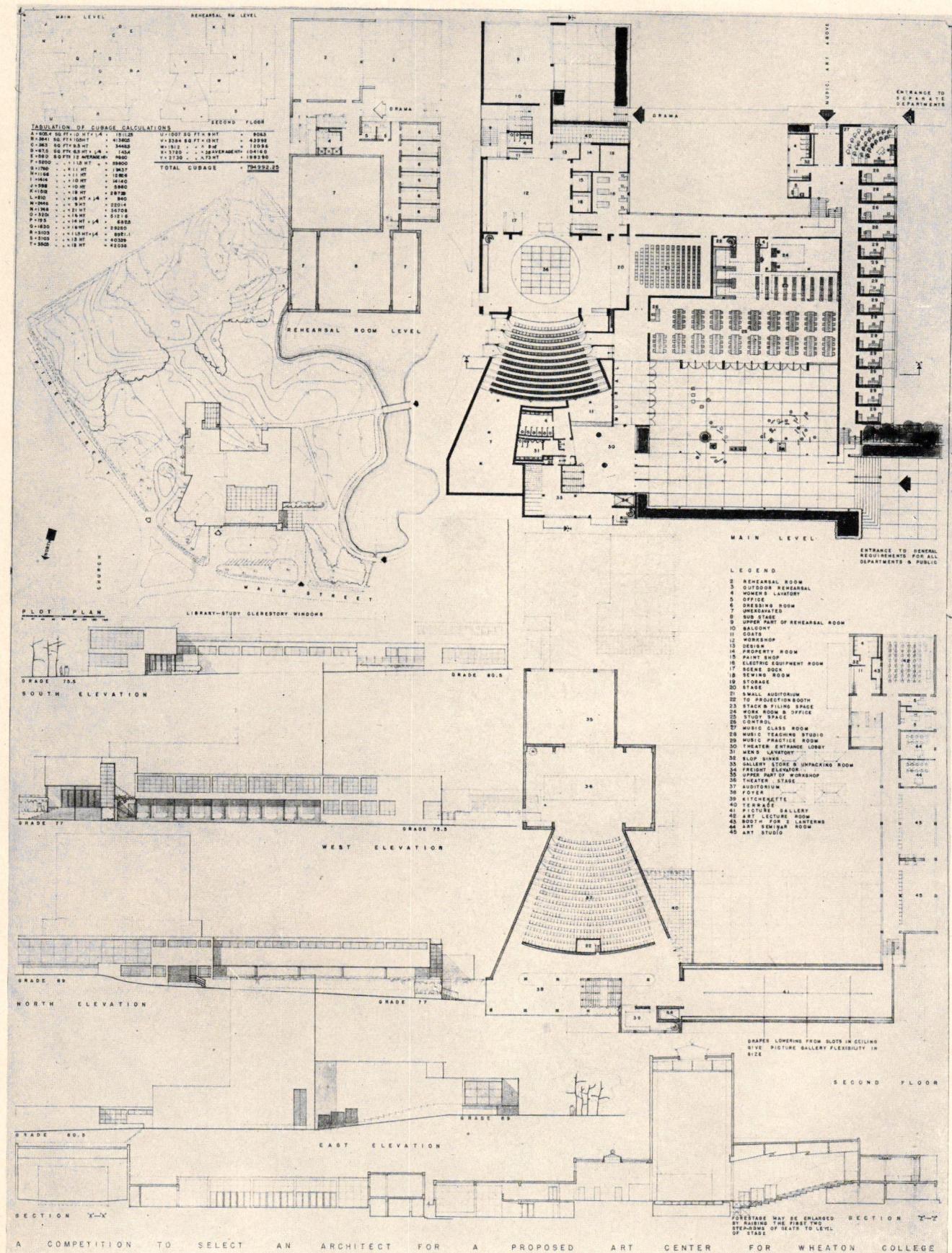
Three things, it seems to me, might well have been demanded: correct scale, suitable character, and beauty of proportion. The ten prize drawings show a general excellence in the third of these qualities, which speaks well for the basic taste of American architects. In the other two qualities there is the most extraordinary divergence. Post office character, particularly when the post office is a small one, is an elusive thing. The building cannot be too monumental; it should look public, and not commercial; and, without being ostentatious, it should not be, I feel, confused with, say, a public library or a house. In character, the submitted designs seem generally to be adequately handled, though there is a certain bank-like stolidity in some of them.

It is in scale that there are the greatest and the most significant differences—to such a degree, in fact, that one is tempted to say that, if the scale of one is right, the scale of others must be totally wrong. Both the designers and the jury seem to have forgotten at times that the problem was one of a *small* post office, and to have neglected entirely the telltale scale figure for each elevation. Thus we have Nos. 390, 169a, 205, which seem buildings that should be at least twice the dimensions given. Their proportions are those we associate with the largest and most monumental structures, and yet their bay spacings are narrower than those of a country-house piazza. Any design for a large building, cut down to half its scale, will look, not grand, but dinky. Thus, openings of the same size in different designs are

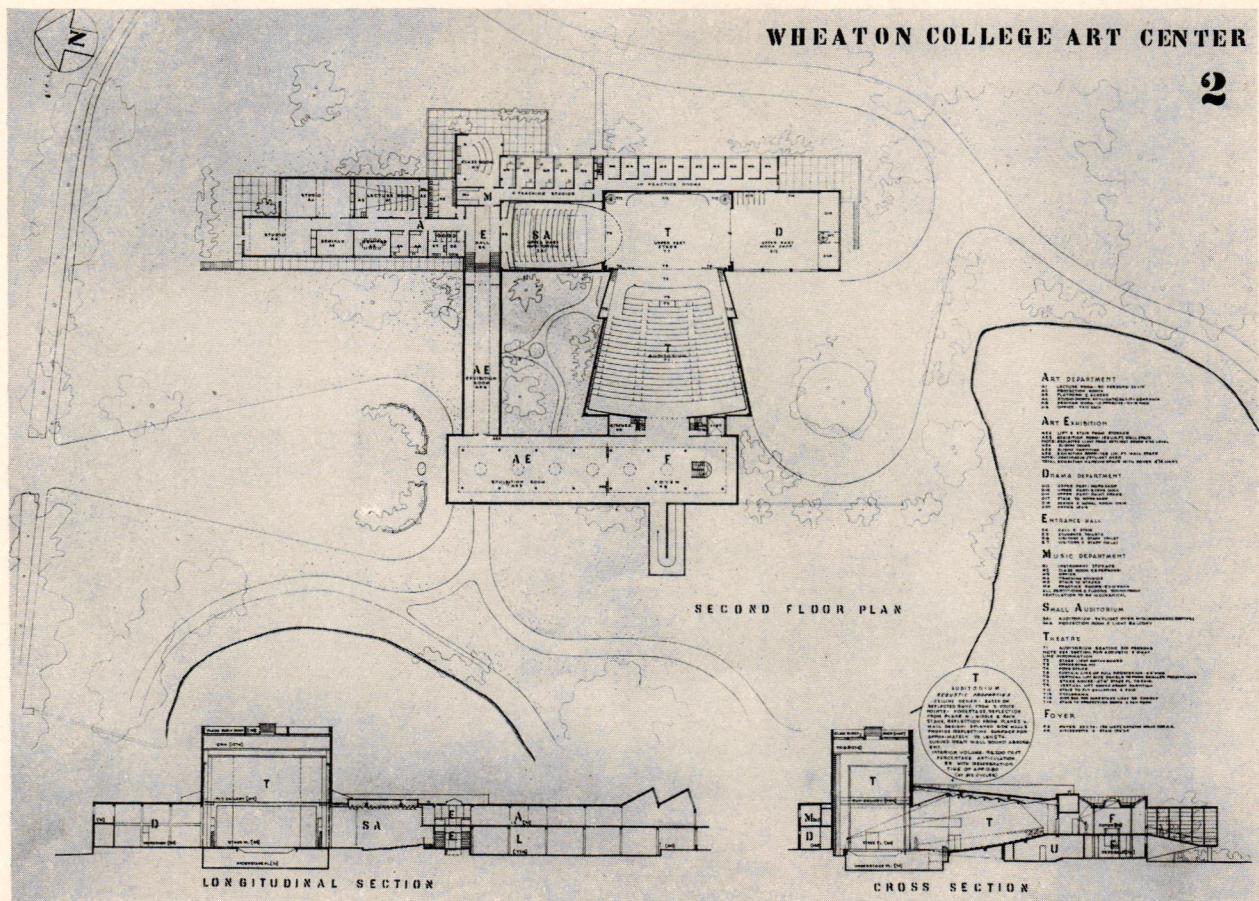


*Third place in the Wheaton College Competition went to the team of Pierre Bézy, John W. Stedman, Jr., and Paul L. Wiener of New York*

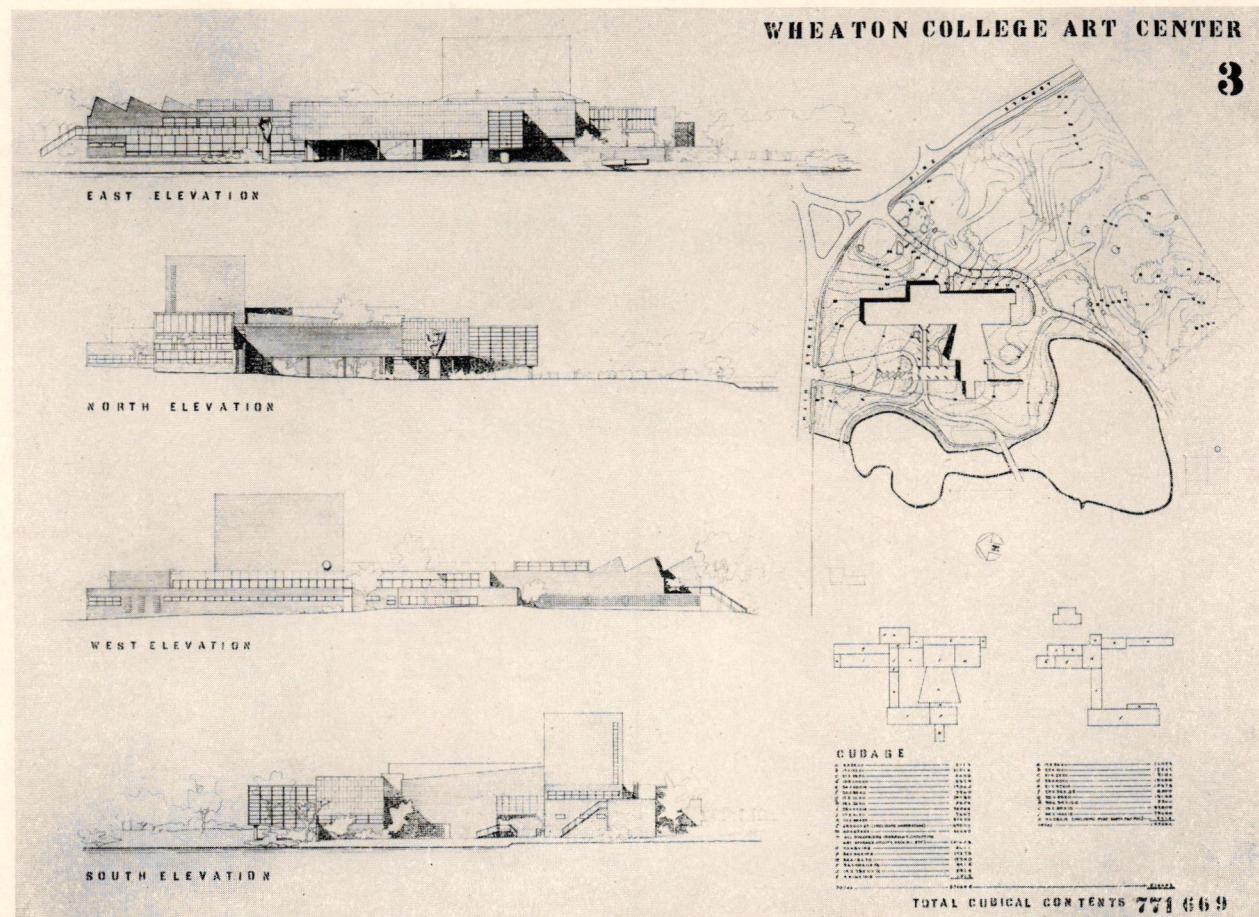


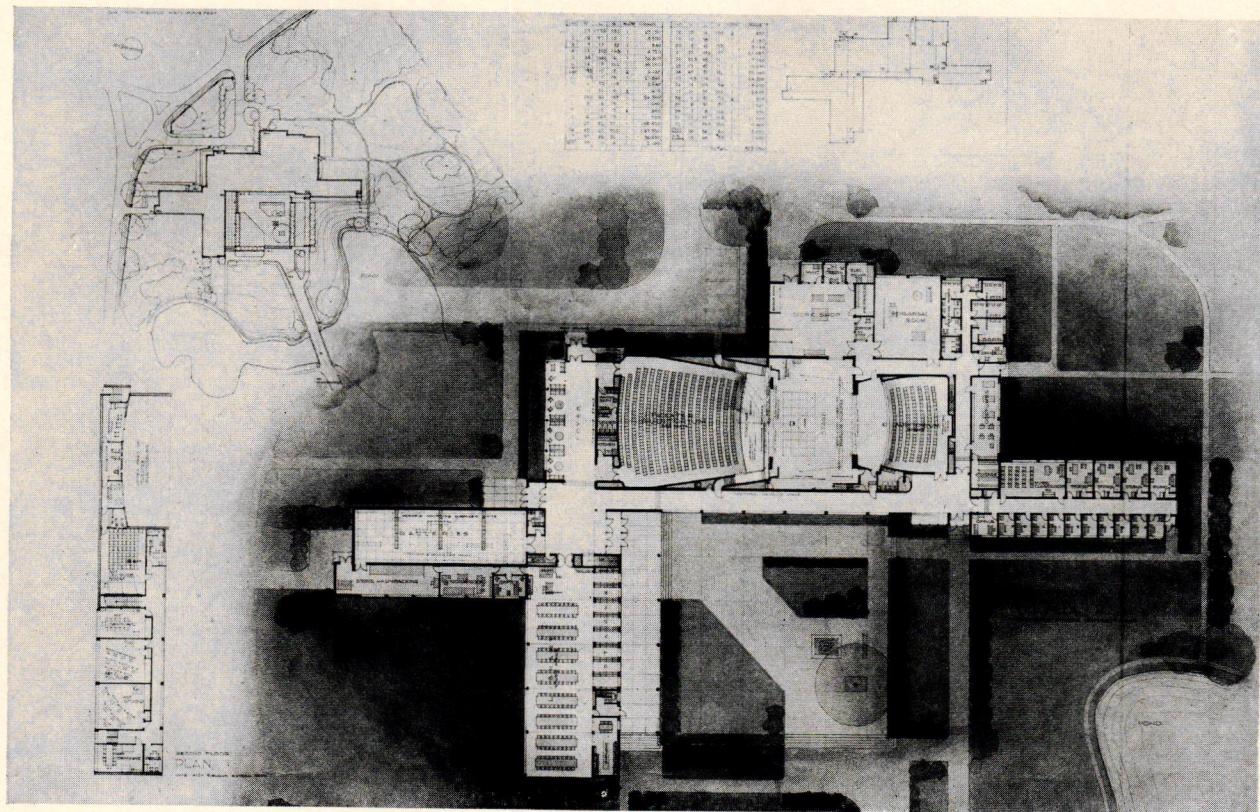


Alexis Dukelski of Jersey City, N. J., who consistently does well in competitions, was placed fourth by the Wheaton College jury

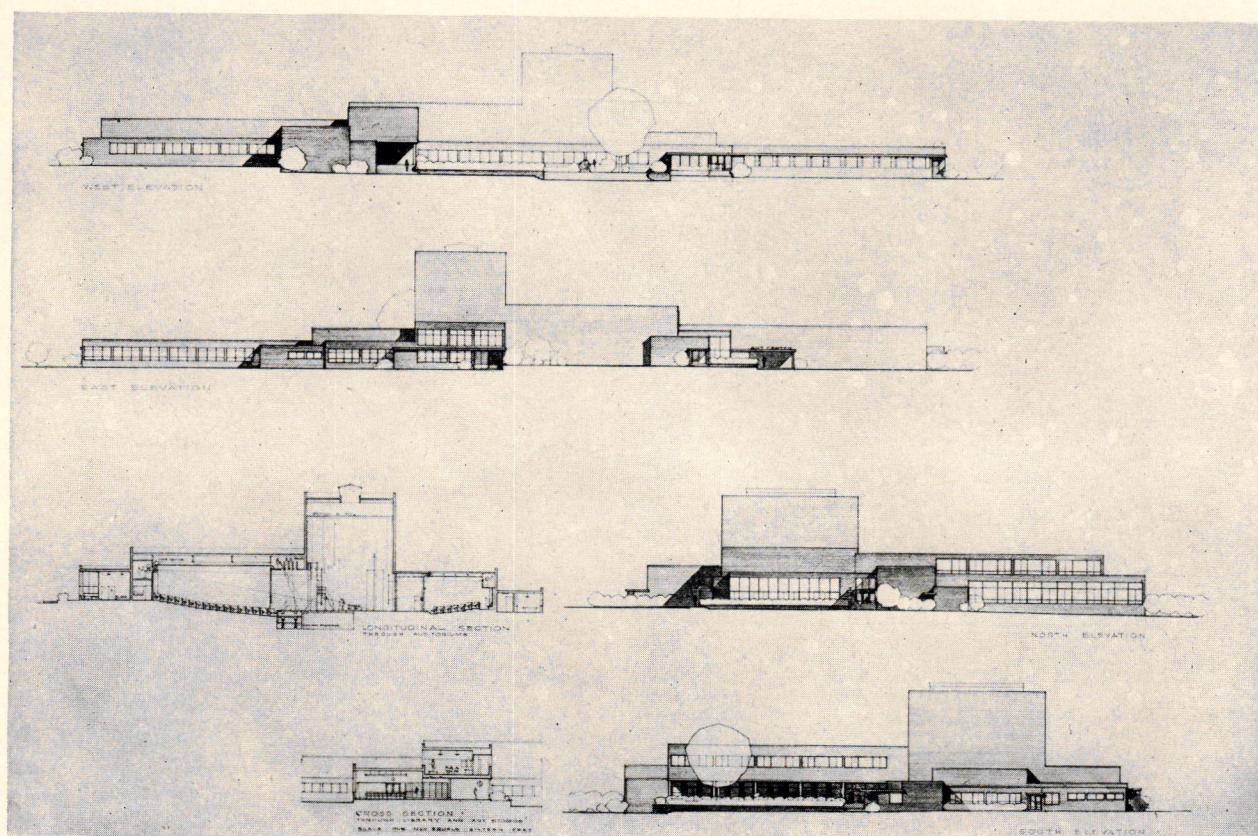


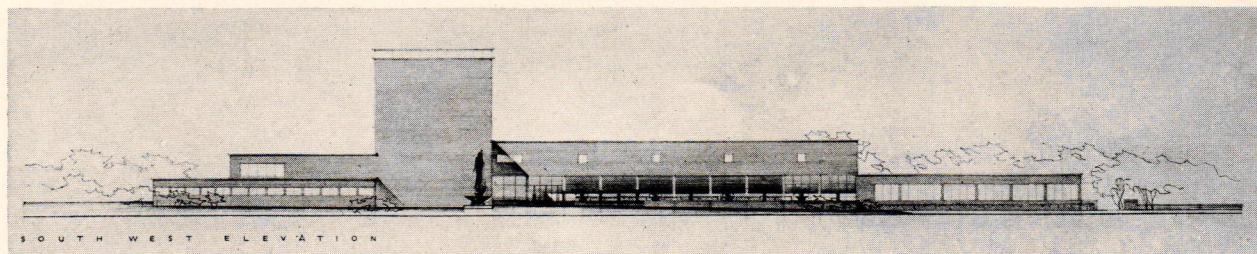
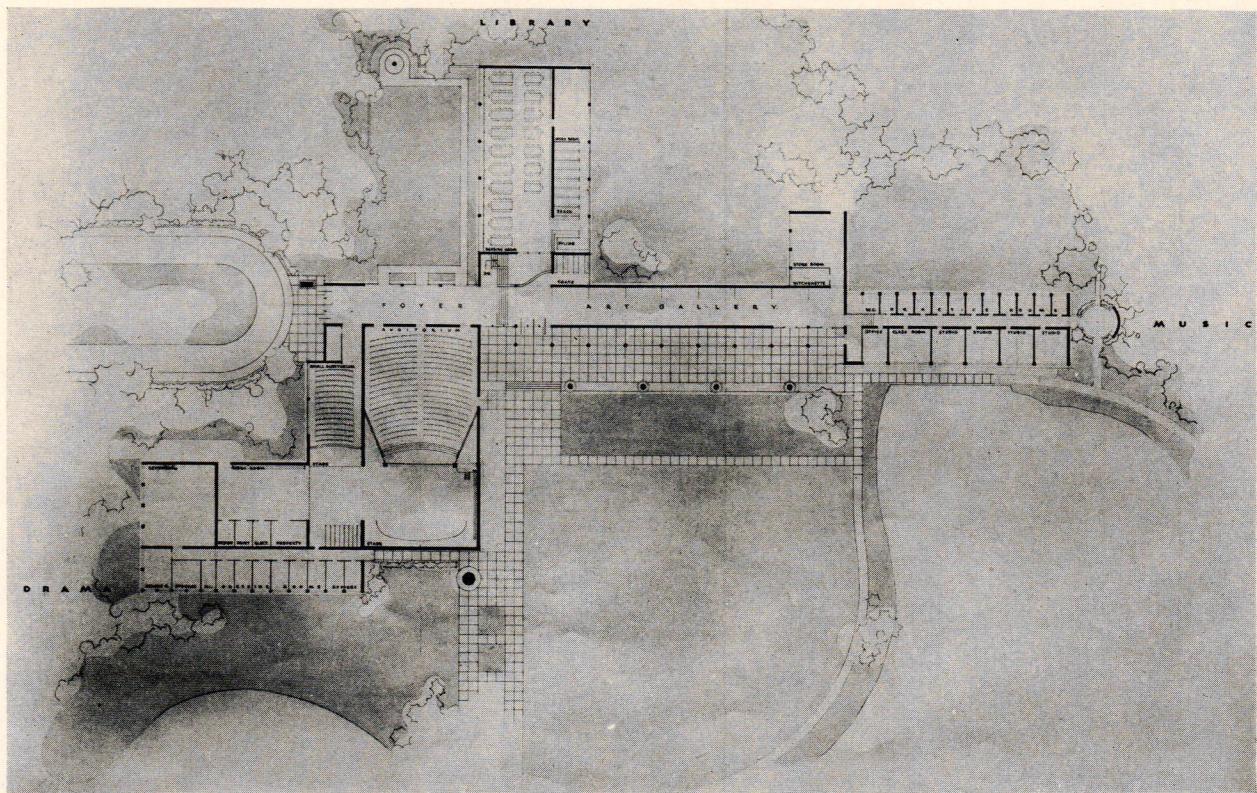
*Three designs were placed fifth: this one is by Percival Goodman of New York*



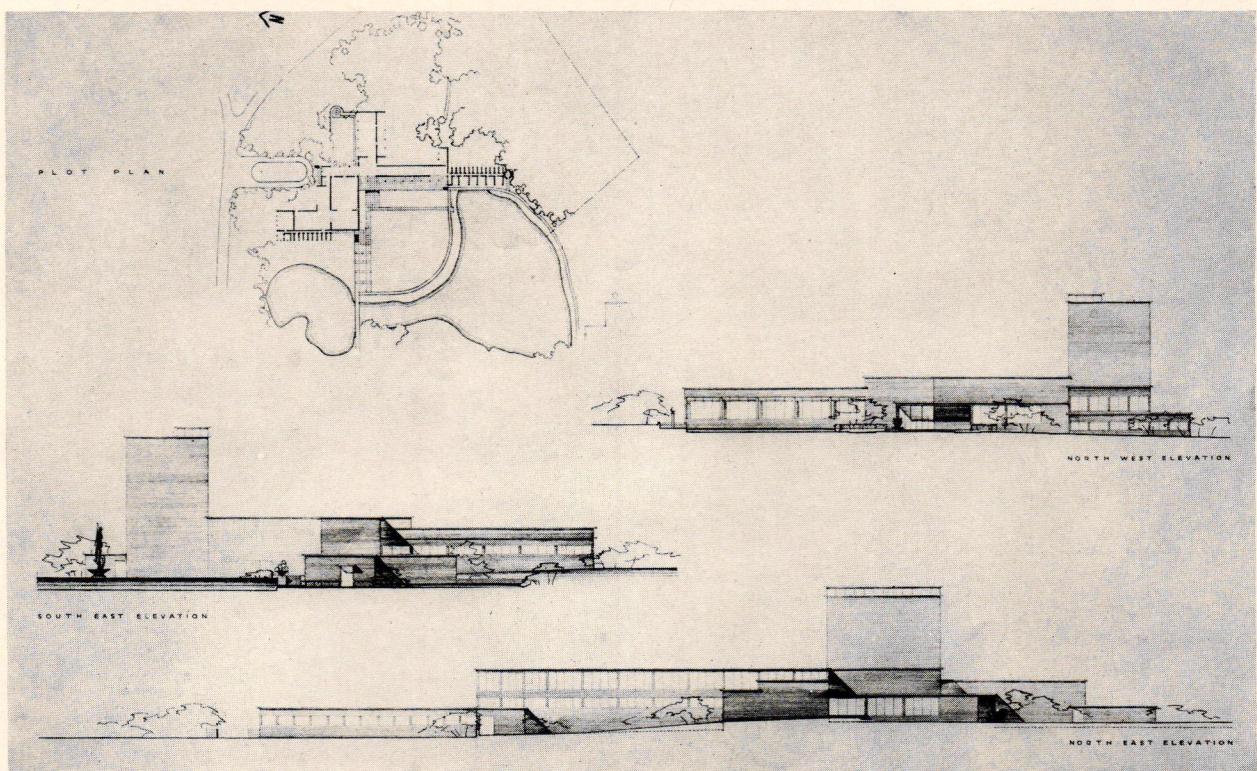


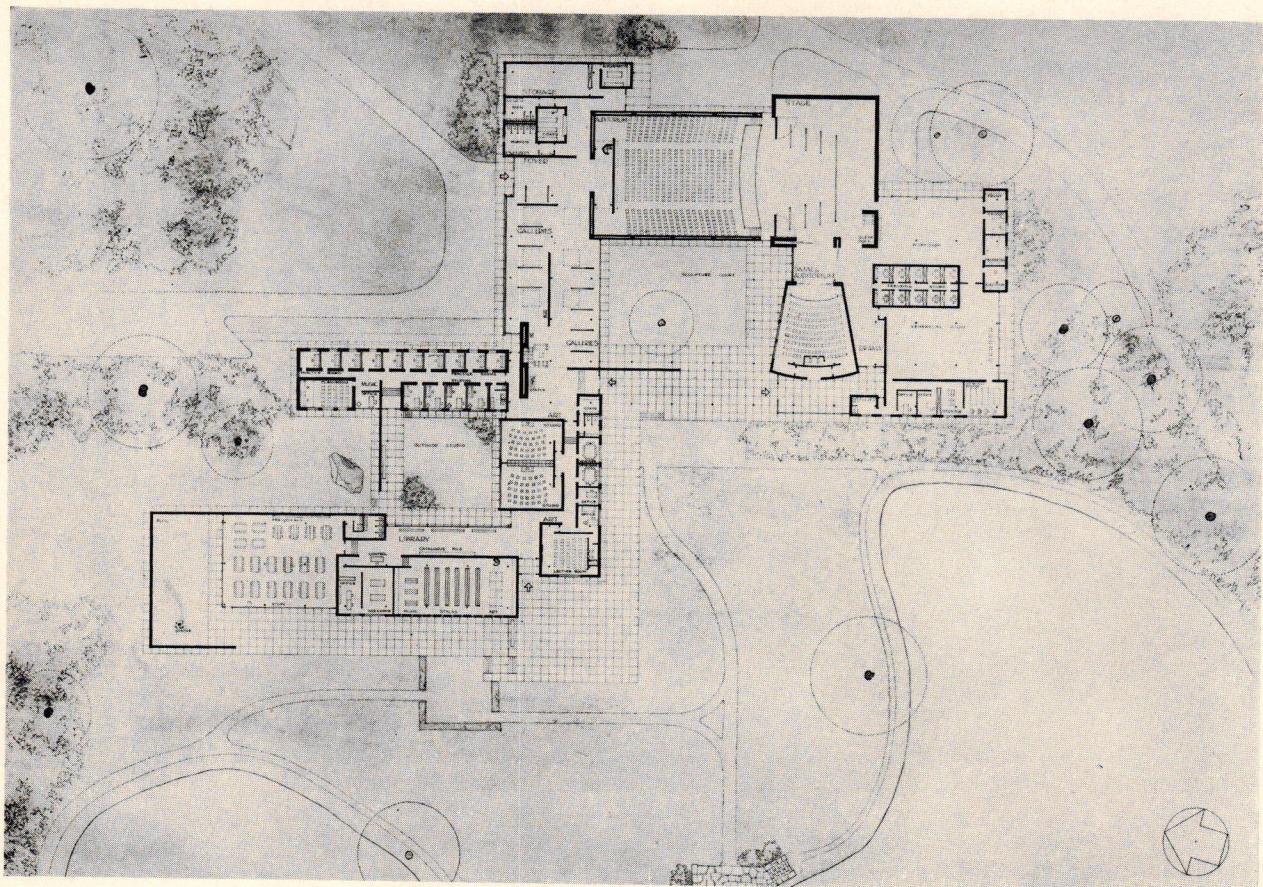
*The firm of Lyndon and Smith of Detroit were among the four invited competitors in the Wheaton College Art Center Competition and placed fifth in the final*



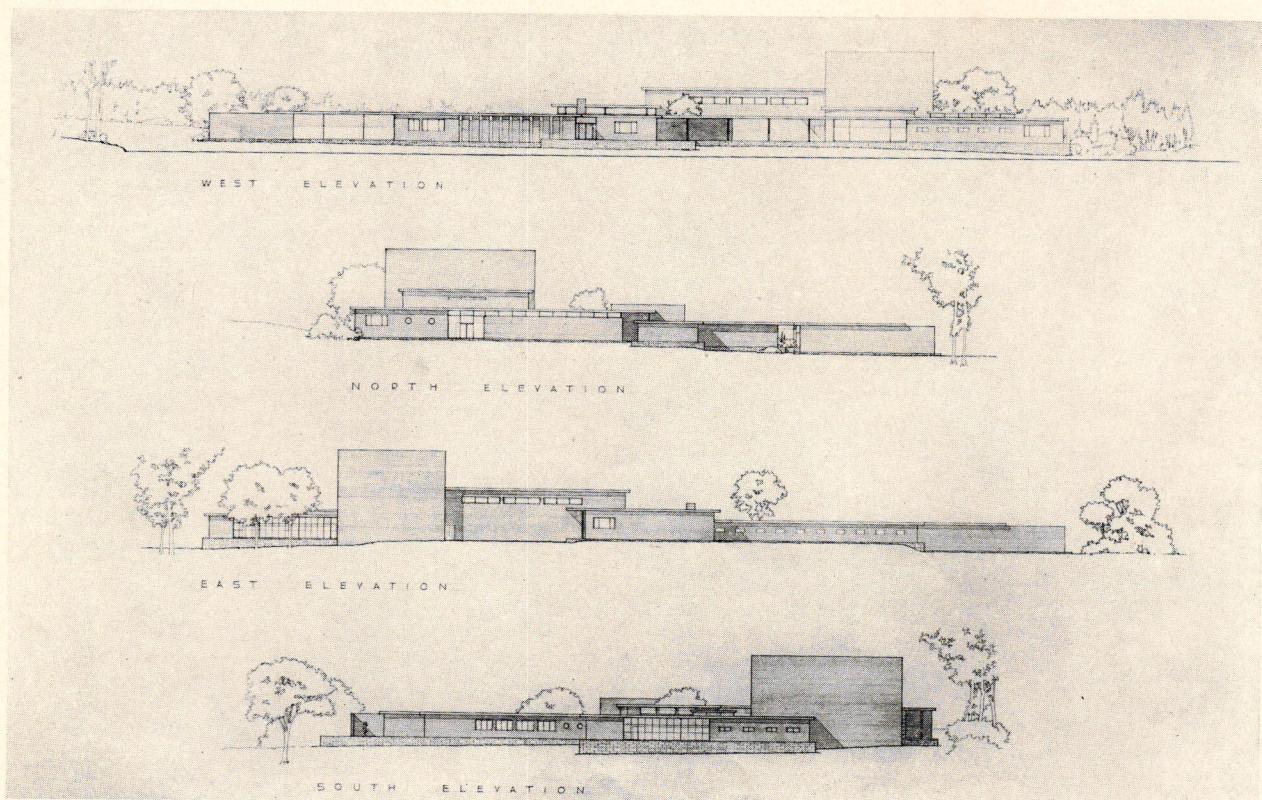


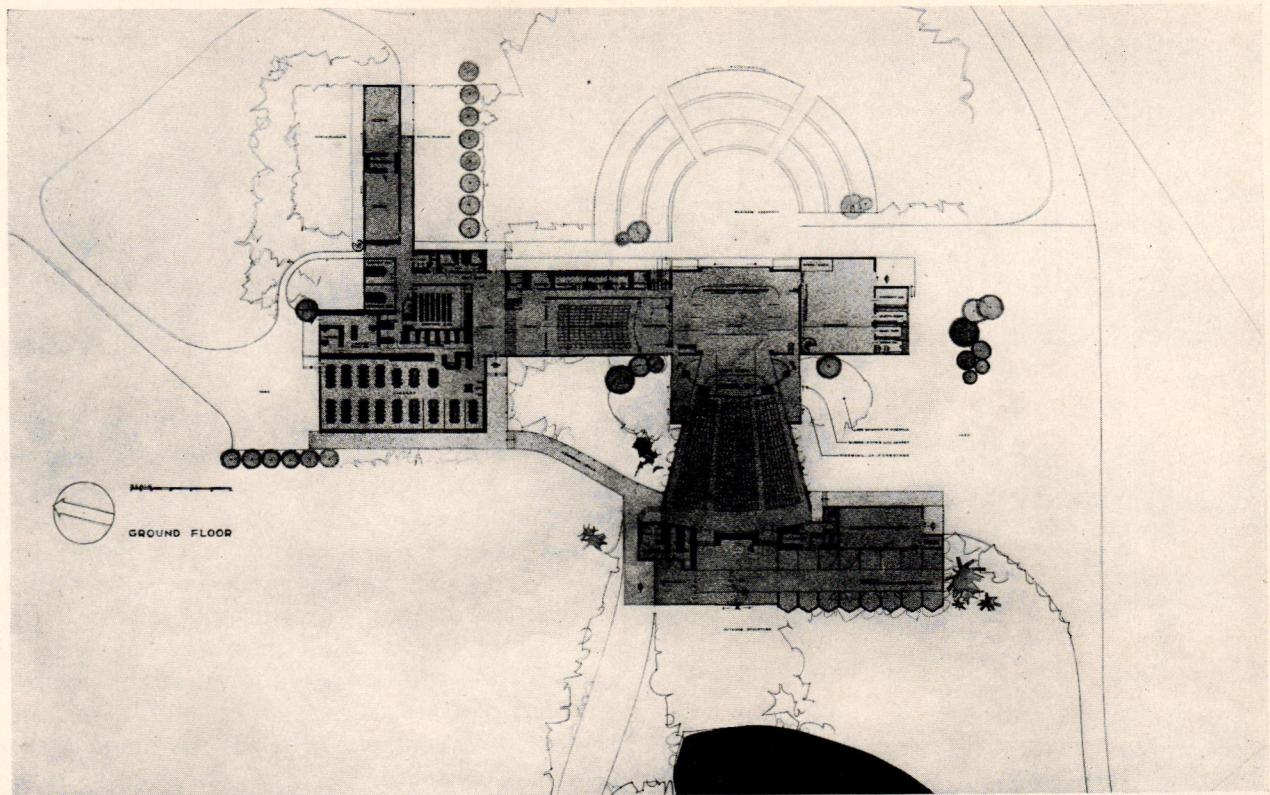
*Eero Saarinen of Bloomfield Hills, Michigan, was also placed fifth*



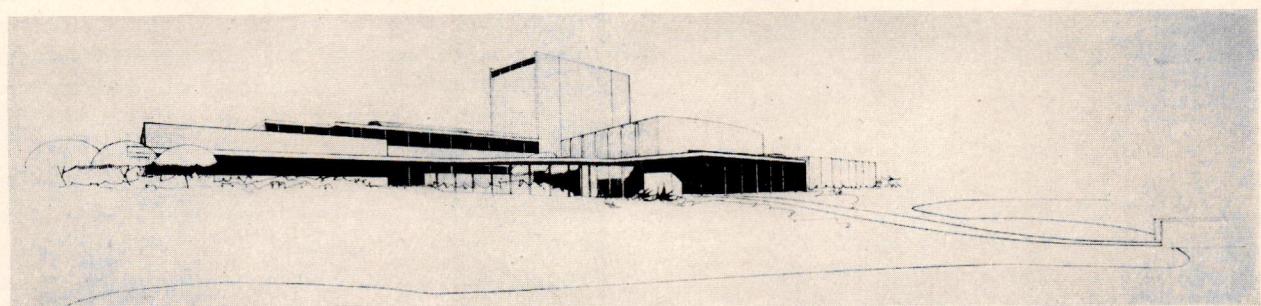
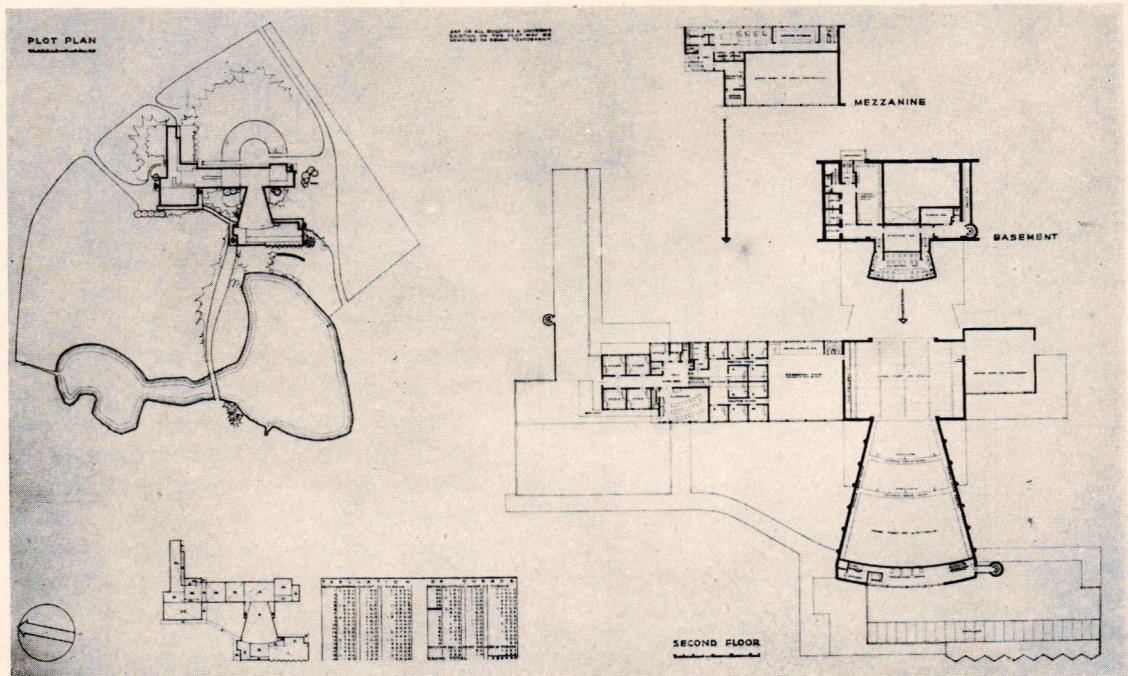


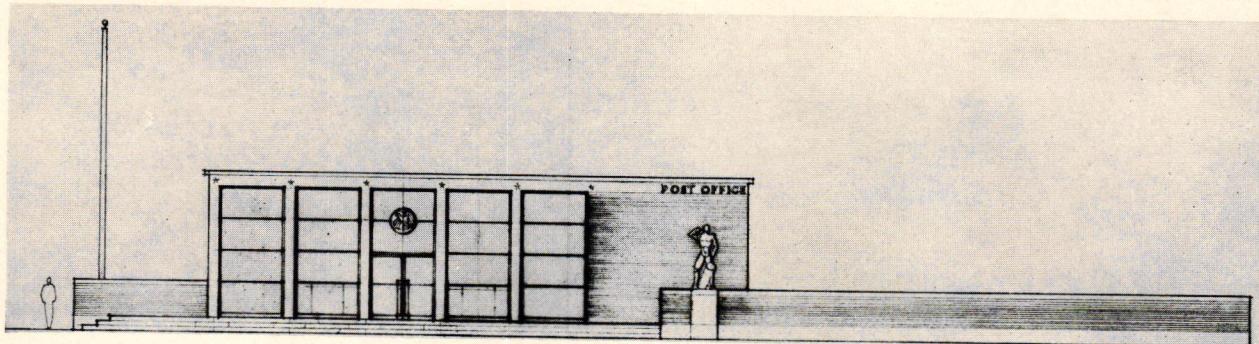
Carl F. Brauer, William T. Priestley, Jr., and John B. Rodgers of New York were successful to the extent of winning a Mention in the Wheaton College competition





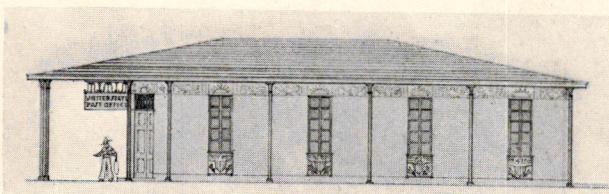
*Invited competitor Richard Neutra of Los Angeles also got a Mention*





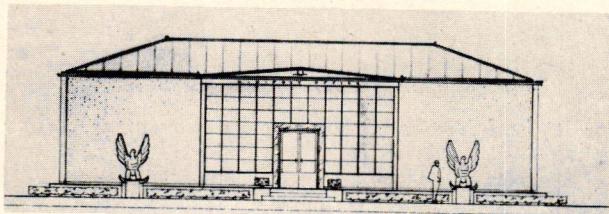
151-A

JOHN EDWARD MILLER



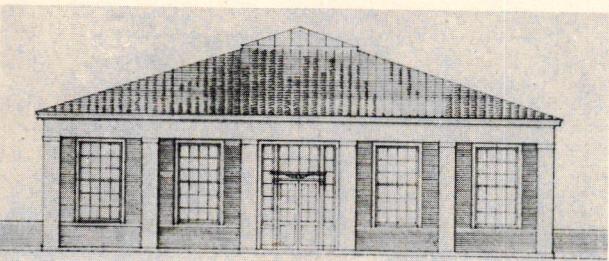
210

HARVEY STEVENSON &amp; EASTMAN STUDDS



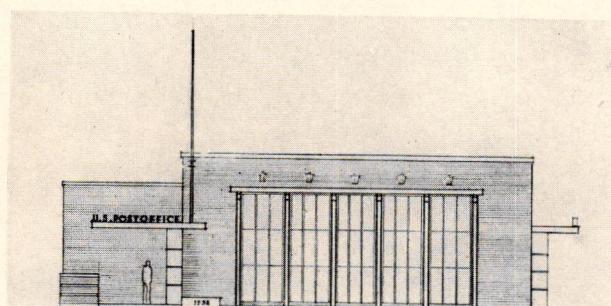
072

ARTHUR F. DEAM



323-A

CARL F. GUENTHER



169-A

T. MARSHALL RAINNEY

Five of the ten designs awarded prizes in the recent federal competition for the design of small post offices are shown here. The other five are presented on the facing page

treated by some competitors as simple, domestic-looking, double-hung windows, and by others as though they were metal sashes of superhuman size. Theodore White's design might have been excellent in its direct simplicity, but something made him add arched panels at each end to falsify the scale entirely. Similarly, Theodore Fletcher's design, with its five 6-foot-odd door-windows, might possibly have had a treatment which would make it look less enormous. On the other hand, Miller and Guenther's 4-bay stone design errs on the other side and details its entrance in a way that suggests an 8-foot house door.

Of the more monumental designs, Carl Guenther's design 323 is undoubtedly the best, because the simplest, the most direct, and the only one which achieves real monumentality within the scope of the given scale. In addition, its simplifying of façade material into large sheets of marble, and its avoidance of unnecessary detail all help it.

Two of the designs stand out as definitely unusual creations—one that of Stevenson and Studds, with its covered portico supported on slim metal columns, its wrought-iron sign, and its generally "country" character; the other that of Arthur F. Deam, because of its daring simplification of the windows and door into one large glazed opening, and its delicate and playful neo-classic detail. Both of these designs, different as they are, have a somewhat similar character of invitation, and both take certain phases of American classic precedent as their inspiration. The Stevenson and Studds design would probably build better in the more rural communities of the South and Southwest; that of Arthur Deam would be more suitable in a rather sophisticated suburb or a small college town proud of its learning.

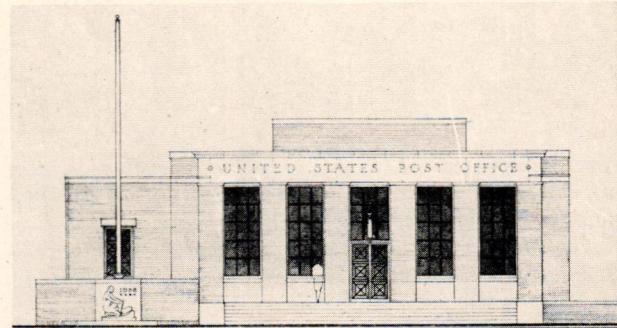
The success of almost any of these buildings, especially those which seem most effective in elevation, will be so dependent on the detailing that one only wishes the designers themselves might control it. This is especially true of the Deam design, which must be neither finicky and effeminate nor stodgily

archaeological. Mr. Miller's design 151a is another unusual design which might be made or broken by its detail. On the face of it, it is over-scaled and suffers like those already mentioned from seeming to be a larger building cut down; yet one can imagine it so sensitively and beautifully detailed as to have an almost jewel-box character of marble and glass and seem to be the small building that it really is.

Inconclusive as the results of this competition may seem, one thing is undoubtedly true—they have brought out an imaginative quality of design, in at least four of the ten examples, which is sorely needed in our official architecture. So many of our small post offices are "merely adequate"! They have no excessive faults, but as one goes through country villages and the small towns where they have been built one is appalled at their universal dullness and a sort of hard, bored-looking detail. With a few exceptions, post offices built from these prize designs might at least avoid this curse, and one can well imagine buildings built from No. 323, No. 072, No. 210, and No. 151a really adding to the beauty and the interest—even the amusing quality—of many of our towns. This is enough to have made this competition worth while.

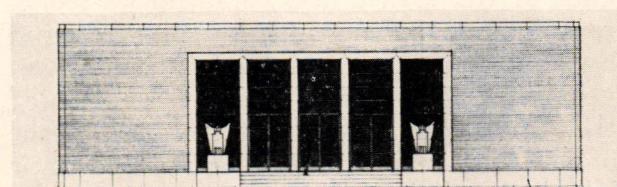
The competition system has undoubtedly, in these two first large-scale trials, not only resulted in bringing out the work of many architects who otherwise would have had little immediate chance, but also, I believe, proved itself from the point of architecture itself. In both of the competitions, the best designs have a quality which would not, I believe, have been obtained had the design been commissioned in the ordinary way. Competitions lead inevitably to experimentation in design, and the effects of that experimentation will be seen not only in the buildings finally erected, but even more in the education they give to juries, to architects, to clients, and to the public.

*The prize-winning design and the three designs receiving Honorable Mention in the Government's recent Covington, Ky., Post Office and Court House Competition are on page 16 of the Advertising Section*



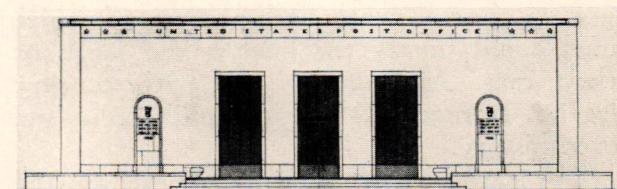
390

FRANCIS W. ROUDEBUSH



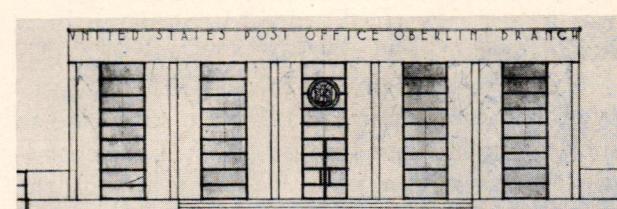
205

THEODORE FLETCHER



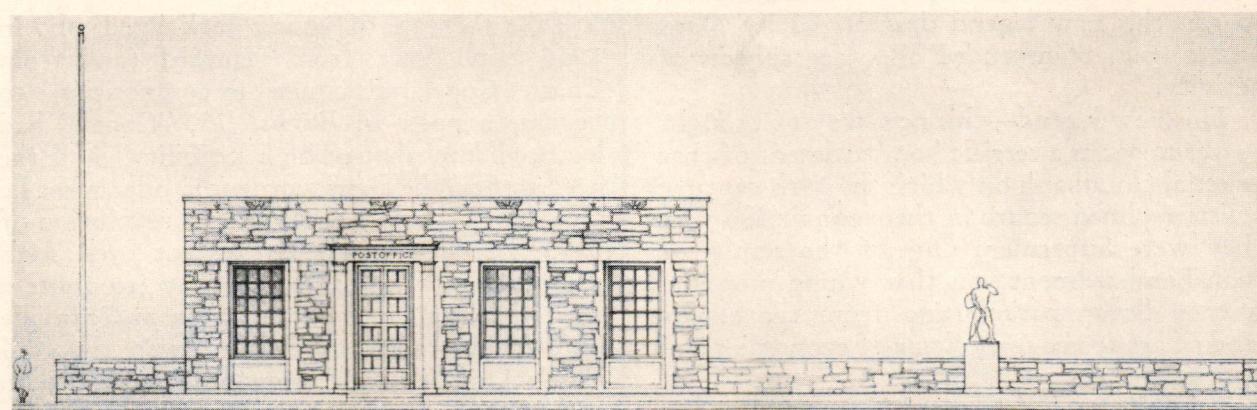
202-A

THEODORE BALLOW WHITE



323

CARL F. GUENTHER



151

JOHN EDWARD MILLER & CARL F. GUENTHER

# PARACHUTING ARTISTS

BY ROBERT L. ANDERSON

EDITOR'S NOTE:—*This article is the eleventh of a series of connected discussions by Mr. Anderson of Art Philosophy, designed to make clear the changes that have taken place in the ideology of the world outside architecture and their impact on our architectural thinking.*

IT HAS been pointed out that toward the close of the 19th century humanity's recurrent interest in economic equality received dynamic impetus. For convenience such development was referred to as the Religion of the Social Ideal. As was suggested, the impact of this new religion upon artists and their inherited Religion of Art was to be terrific.

Under the Religion of Art the artist could rest content in the belief that his art was the great universal synthesis by means of which men could survey the history and ideals of their race. Art, so ran this 19th century legend, transcended religion, philosophy and even history.

The legend persisted even when men shifted allegiance from retrospective to prospective evolution. Art, so ran the remodeled legend, was to preview the Future as competently as it had post-viewed the Past.

Under the Religion of the Social Ideal, however, it was no longer possible to subscribe to such an exalted conception of art. For according to this new way of thought, it was the economics of society, not its philosophy or its art, which provided the synthesis by means of which men were to survey and evaluate the past, the present and the future. Economics, so ran this new legend dramatized by Marx and Engels, transcended all other spheres of activity.

This new legend—this new way of thought—was to act as a terrific bombardment of that celestial cloudbank on which the 19th century artists reclined secure in their conviction that they were Supermen. One of the results of such bombardment was that young men and women began parachuting from the cloudland of art to the *terra firma* of economics and politics.

Take the case of Bernard Shaw. In 1882 he attended a lecture by Henry George on land

nationalization. As a result of the revelation received there, all the controversial subjects of his day became "mere middle-class business . . . The importance of the economic basis dawned on me." Someone told him to read *Das Kapital*: "Karl Marx," he once said, "made a man of me." Shaw's subsequent career as a Fabian Socialist began.

Or the case of Jack London, for instance. Taking the road with Coxey's Army in 1894, somewhere along the line of march he was told about *The Communist Manifesto*. On reading it he "capitulated utterly to Karl Marx's reasoning." When, three years later, he joined the Klondike gold-rush Marx's *Capital* (together with Darwin's *Origin of Species* and Milton's *Paradise Lost*) went over Chilkoot Pass on his back. Strange baggage for one prospecting for gold, mineral or literary. But London had already achieved notoriety as California's "Boy Socialist."

Or consider the case of Mary Heaton Vorse who, at the time of the Lawrence strike of 1912, was writing about the theatre. Reading a newspaper account of the strike she thought: "Before night someone is going to send me to Lawrence." Harper's Weekly sent her. What she saw there, together with the unemployment of the winter of 1914 aroused, as she wrote in *Footnote to Folly*, "an indignation whose fire has never gone out." She had begun on that long trail which was to lead her from literature and the theatre to all the major strikes of the country.

Take the case of young Jack Reed who in 1910 came down from Harvard (and from Charles Copeland's courses in composition) to become a poet. In *English 12*, "Copey" had lectured him about "high visibility" and the need to find the right words to render what he saw. Sent to report the Mexican revolution of 1913, he developed such perfect eyes, such perfect command of words, that (to quote a somewhat malicious comment from Granville Hicks's biography of Reed) "even the chill intellect of Walter Lippmann was moved to enthusiasm."

Yet only three years later Reed could write:

"I have discovered, with a shock, how far I have fallen from the ardent young poet who wrote about Mexico . . . Please God, I intend to get back to poetry and sweetness, some way."

Reed's book, *Insurgent Mexico*, had been dedicated to Copey: *To listen to you is to learn how to see the hidden beauty of the visible world: to be your friend is to try to be intellectually honest.* On the one side beauty; on the other side intellectual honesty. No greater tradition could be passed from teacher to pupil: Charles Copeland's heart must have overflowed when he read the dedication.

Yet Jack Reed's prayer to get back to poetry was never to be granted. For he was to step faster and faster on that disastrous path which led from poetry to a grave in the heart of Red Russia. Rightly or wrongly, his intellectual honesty had conquered his love of beauty; the Russian Revolution had supplanted Copey's courses in literature. His great book is *Ten Days Which Shook the World*. His burial, at the age of thirty-three, was a revolutionist's burial in a foreign land. It is, perhaps, the most spectacular, the most tragic example of that passage from the Religion of Art to the Religion of the Social Ideal which we of the modern world have been compelled to make.

\* \* \* \*

These are but specific cases, serving to indicate the ferment which occurred when the 20th century Religion of the Social Ideal collided with the 19th century Religion of Art.

The ultimate result of it all was that men turned from the realm of art to the realm of economics and politics. Even the artists ultimately were to conclude that the drama of destiny must be staged in the politico-economic rather than in the æsthetic theatre.

It must be pointed out, however, that in the beginning men did not cleave so sharply between art and political economy as later they were compelled to cleave. As was pointed out in the January PENCIL POINTS, the inherited Religion of Art had begun to collapse as men became increasingly preoccupied with economic and social maladjustment. It was, however, but a partial collapse. For while men threw overboard art as the pursuit of beauty, they became dazzled with art as the index of evolving civilization.

I have already commented at length concerning this notion of art as the index of evolving civilization. Yet I should like to make one further remark. From the close of the 19th century to the beginning of the

World War, men were dropping from the cloudland of art toward the terra firma of politics and economics. The notion of the artist as index of evolving civilization can be considered, I think, as the parachute which dropped them gently from the clouds.

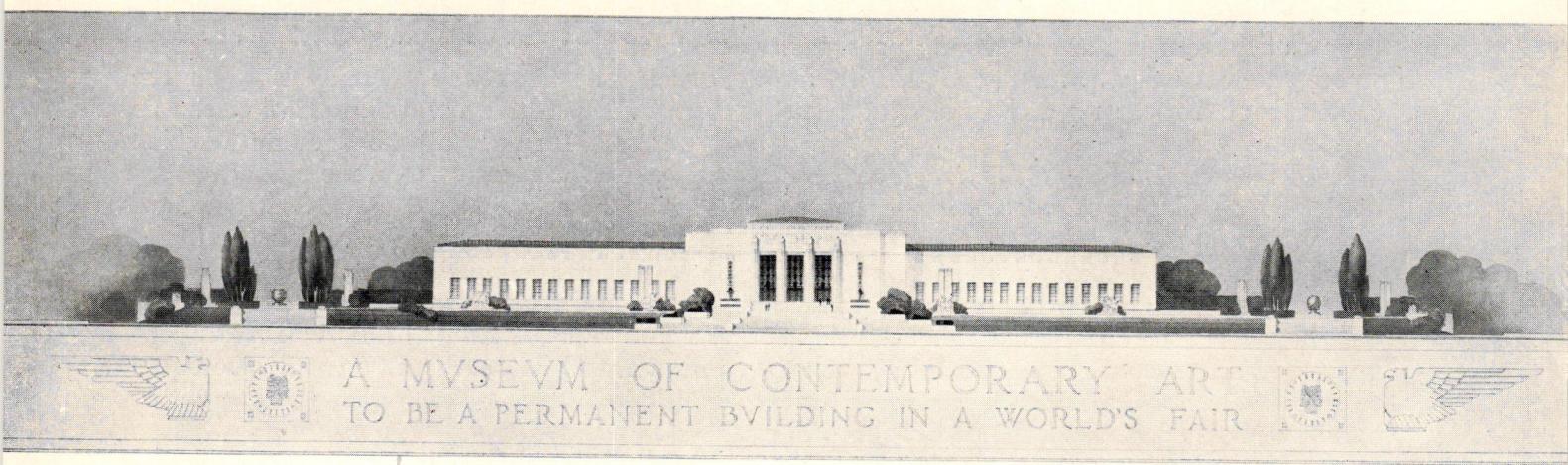
True, having encountered Marx, Bernard Shaw moved almost at once to Socialism. Yet Shaw studied simultaneously the scores of Wagner and the text of Marx: William Archer's first sight of him was in the British Museum where he was studying alternately a translation of *Das Kapital* and the score of *Tristan und Isolde*. As Edmund Wilson pointed out in the February *Atlantic*, the offspring of such mating was Shaw's defense in *Man and Superman* of the "artist-philosopher." The "artist-philosopher" was Shaw's parachute from the Religion of Art to the Religion of the Social Ideal.

I cannot recall that Louis Sullivan ever used the phrase "architect-philosopher." It is immaterial in any case. For *Kindergarten Chats* makes it abundantly clear that he conceived the architect as such. Henry Harrison's phrase in the July 1937 PENCIL POINTS—BEHIND THE ARCHITECT, THE PHILOSOPHER—merely states bluntly what Sullivan stated circuitously.

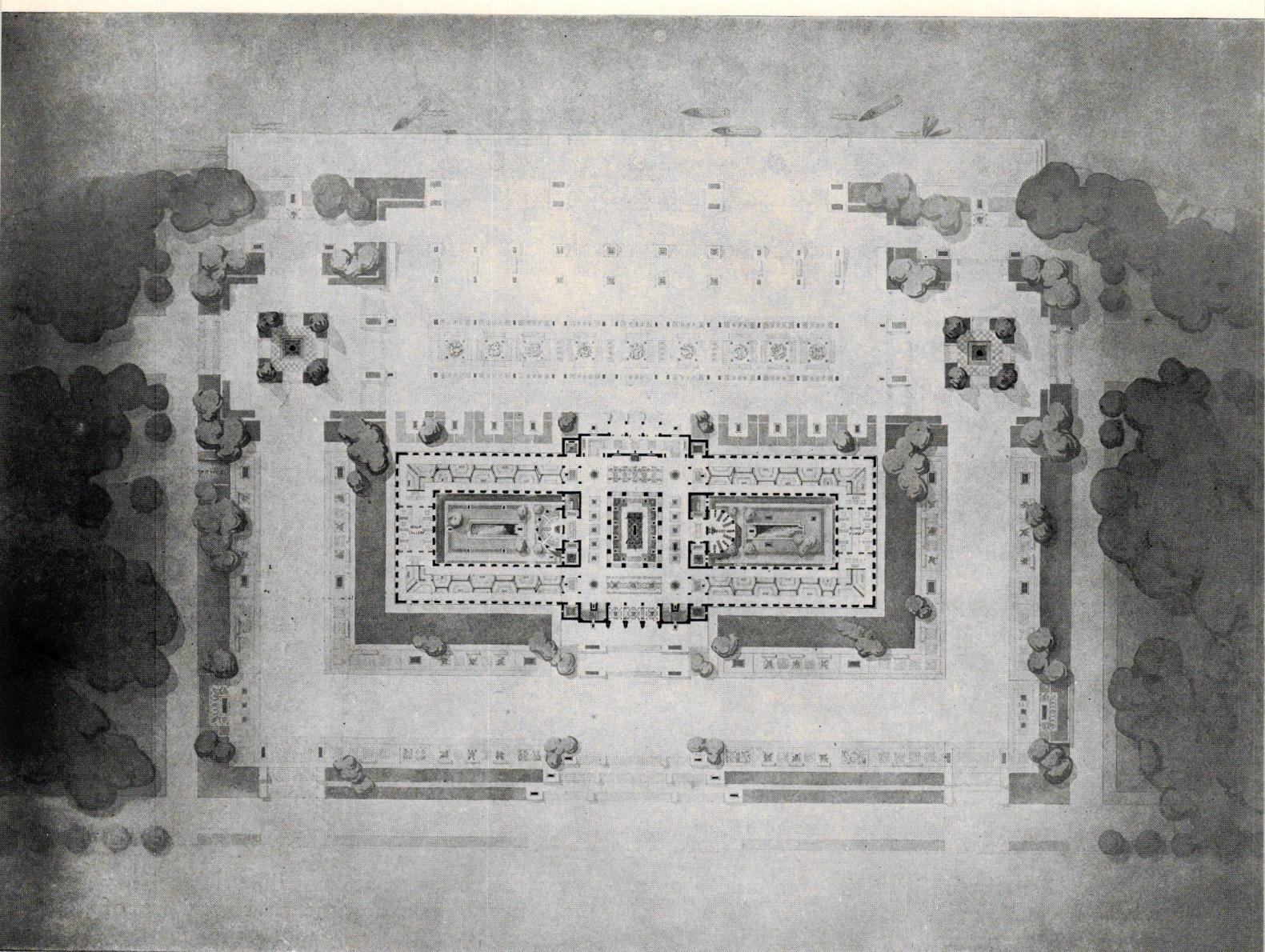
As in the case of Shaw, Sullivan's concept of the architect-philosopher must be considered as his parachute from the Religion of Art to the Religion of the Social Ideal. Consider Charles Whitaker's comment on Sullivan in *Rameses to Rockefeller*: "'Form follows function.' Almost everyone thought, and still thinks you meant those three words to apply to buildings. Few knew, as you knew . . . that nations take their form from their function . . . It is impossible for the form of a civilization to grow out of the functioning of an imperial struggle based on economic anarchy."

I doubt that Sullivan's parachute had dropped as close to the ground as Mr. Whitaker suggests. I doubt that Sullivan saw the drama of destiny in terms of economics: he dreamed too tenaciously (as Mr. Whitaker dreamed to a lesser extent) in terms of an Hegelian, Nietzschean, pre-Marxian Super-architect.

Today men have completed the descent from the Religion of Art to the Religion of the Social Ideal. They have folded up the parachute of the artist-philosopher, and stalk anxiously over the domain of politics and economics. Consequently architects must put away the notion of a universal æsthetic. They must pursue, as did all the great architects of the past, a practical æsthetic.



*An array of facts and suggestions gleaned from a comprehensive study of museums by Olindo Grossi, in his third year as a student at the American Academy in Rome, culminated in his design for "A Museum of Contemporary Art to be a Permanent Building in a World's Fair," presented here and on the following pages as a contribution to the literature on museum lighting. Research data and measured drawings accompany Grossi's museum design*



# THE LIGHTING OF MUSEUMS

A STUDY MADE AT THE AMERICAN ACADEMY IN ROME

BY OLINDO GROSSI

IN recent years theories of museum design have found extensive expression in this country as each large municipality has sought to give improved housing to its art treasures. These museums are permanent monuments that contribute in large measure to the education and pleasure of the citizens. It is with a just sense of civic pride that a handsome exterior and a proper setting are demanded of the museum.

In plan, this building requires the satisfaction of its logical program; consisting of the orderly disposition of the galleries, their ready accessibility and ease of circulation, their varied shapes and sizes, their flexibility, their proper relation to the exhibits, as well as landscaped terraces and inner courts that may afford restful punctuation to the routine of the visit. But of the important factors that consciously or sub-consciously influence the visitors' enjoyment of the art objects displayed, the quality of the lighting is perhaps the most persistent offender in the functional design of a museum. Too often annoyance and weariness, that can be ascribed to dull lighting or unfortunate reflections and glare, interfere seriously with the pleasure derived by the visitor in his study of the exhibits.

Museum collections, with their variety of material displayed, demand different types of lighting as the exhibits vary. In a two-story museum, the first floor may be side-lighted or artificially lighted and the second floor lighted by some form of skylight. While existing museums may be studied for lighting, it is recommended that for varying conditions or for a new design of lighting, some actual experimental gallery in the form of a box or model be built and altered until acceptable results are obtained.

The regular overhead skylight is often used, despite its faults familiar to all. Light from the simple form of skylight has a flat quality which is poor for sculpture and three-dimen-

sional objects in general, as projecting forms cast disturbing shadows and modelled surfaces lose their interesting subtleties. Paintings are so exhibited, but not in a flattering manner. With this type of lighting, the maximum intensity of light is on the floor instead of the walls. Such strong floor illumination is not only misdirected but tends to cause reflections difficult to avoid. The walls themselves are lighted unevenly for they vary in amount of light from the darker corners and upper portions to the lighter central and lower portions. The sunlight side of the skylight gives a quality and color of light different from the other sides. Such a variation has its noticeable effects on the colors used by the artist in painting. Then, too, a disturbing glare is noticeable, especially on entering a gallery. This is due to the fact that the lay lights form the brightest surface in the room and are readily visible.

Galleries with novel and successful remedies for the shortcomings of skylighting can be found in the Boymans Museum at Rotterdam. Here the architect, A. Van der Steur, incorporated his findings after experimenting with a model gallery. To reduce the amount of light on the floor, an opaque canopy or velarium is used in the center of the ceiling. The size of this canopy is flexible, to suit seasonal variations in light intensity. When painted white this opaque portion of the ceiling does not seem unduly heavy or oppressive. At the sides of the center panel, opaque glass louvres or vanes are used to direct and deflect light to the side walls. The louvres are painted a mat white and sloped to conceal the skyline, thereby removing the bright exterior light and its glare from the direct line of vision. The walls are uniformly lighted by the use of different types of glass in the ceiling lights over the louvres. Etched or ground glass is used in the corners, transmitting more light than the opaque enamel and milk glass panes in the center. The atmospheric and neat result is su-



Het Museum Boymans

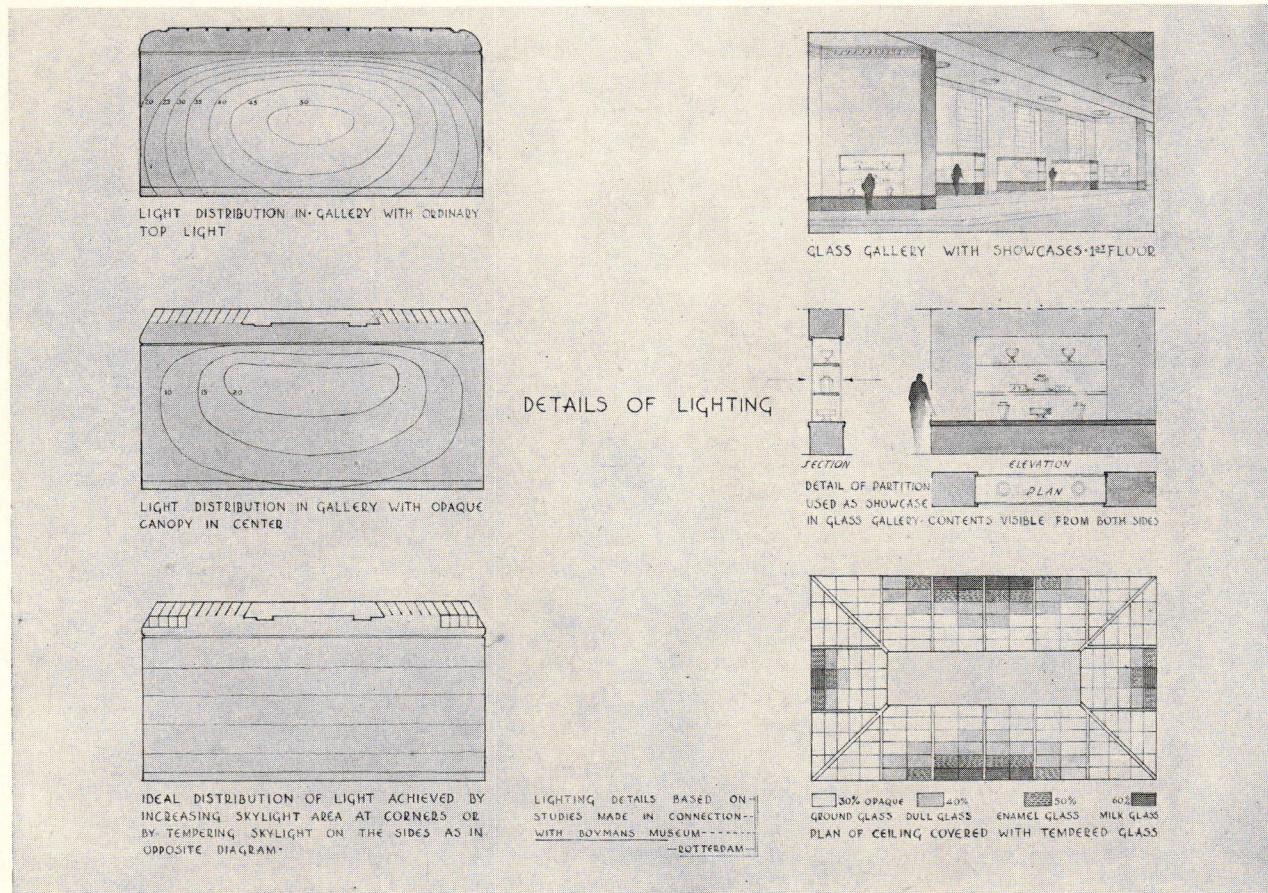
The detail sheet below analyzes the lighting in the gallery, above, of the Boymans Museum, Rotterdam, where an opaque canopy reduces the amount of light

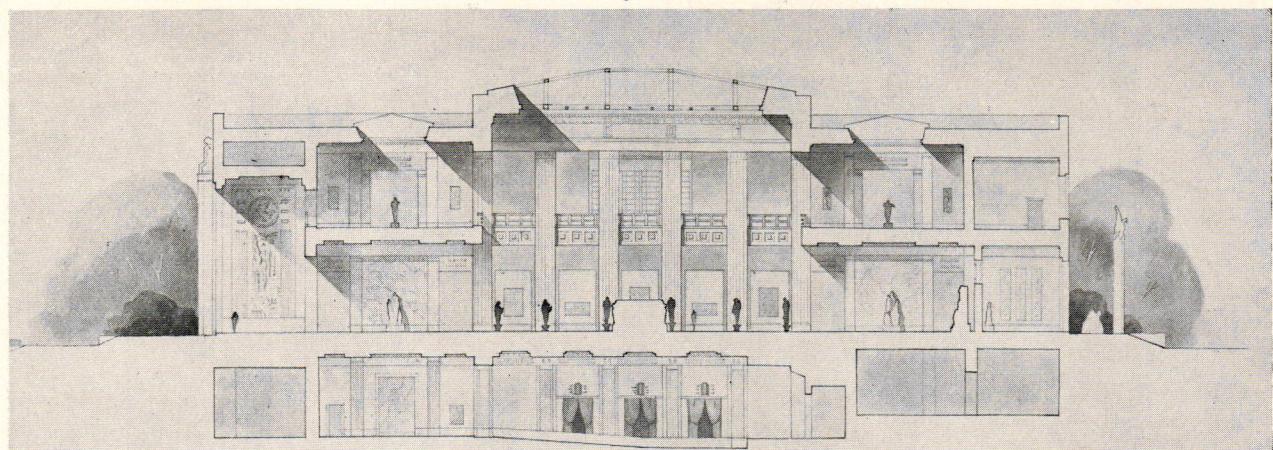
perior to walls with graded intensities of light.

In an effort to achieve the same effect, experiments were conducted with more skylight area in the corners than over the center of the walls but the light source became awkward in form and was not readily adaptable. The problem of equalizing the quality of light on all sides of the skylight is handled by the use of double-obsured glass screens on the sunny side. Many of the museums in this country have solved this problem by installing a series of narrow strip louvres at the skylight or over the lay lights. These louvres, adjustable to different positions, can be operated to control the intensity as well as the color and sunny quality of the light.

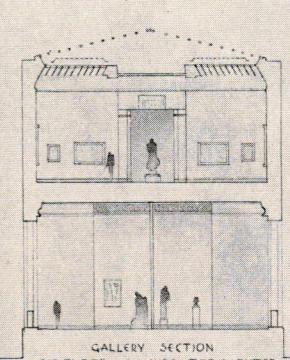
The artificial night light in the skylighted galleries of the Boymans Museum comes from above the louvres, also having the commendable qualities of being uniformly distributed, glareless, diffused and directed to the walls instead of the floor. These characteristics afford a cheerfully-lighted interior and are helpful in preventing "eye fatigue." For temporary exhibits, a similar effect can be obtained with natural or artificial light by stretching a diffusing cloth across a gallery at a height considerably lower than the source of light.

Of the other forms of natural lighting for a

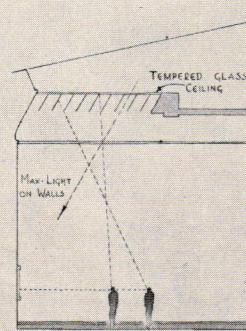




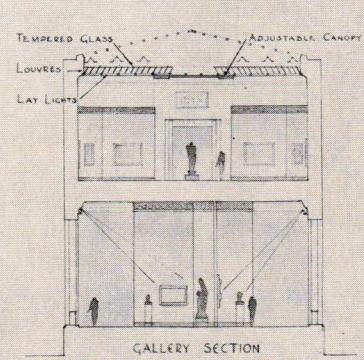
TRANSVERSE SECTION



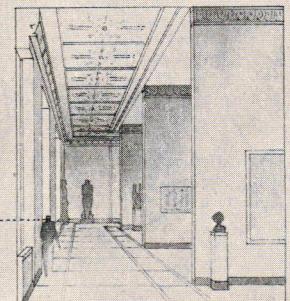
GALLERY SECTION  
2<sup>nd</sup> FLOOR - LOUVE TOP-LIGHTED  
1<sup>st</sup> " - SIDE LIGHTED



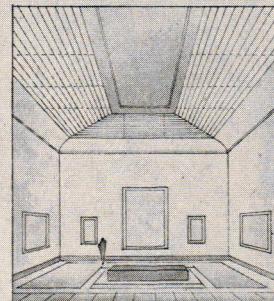
SECTION SHOWING HOW DIRECT RAYS FROM ABOVE DO NOT INTERFERE WITH SPECTATOR THROUGH USE OF LOUVRES



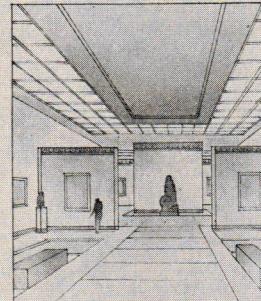
GALLERY SECTION  
2<sup>nd</sup> FLOOR - TOP LIGHT - MOBILE PARTITIONS  
1<sup>st</sup> " - NIGHT LIGHT FROM ABOVE WINDOWS



FIRST FLOOR GALLERY - MOBILE PARTITIONS ON ONE SIDE OF CORRIDOR. VIEW OF GARDENS ON OTHER SIDE.

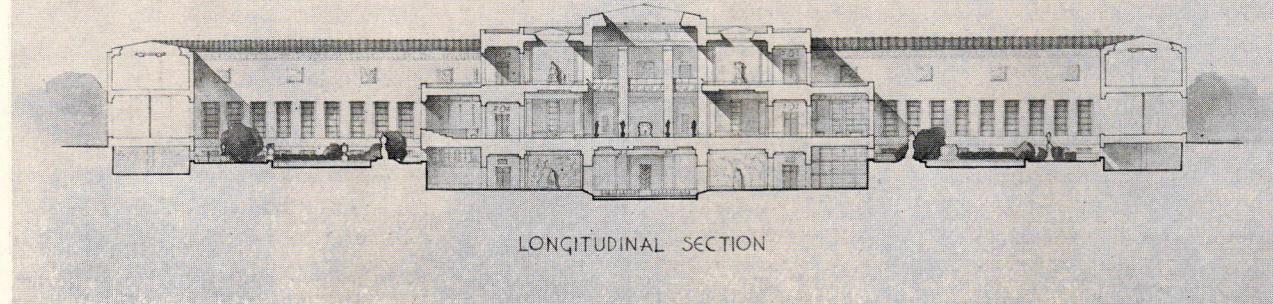


GALLERY WITH LOUVE TOP-LIGHT - EVEN LIGHT ON ALL WALLS - SEE 2<sup>nd</sup> FLOOR PLAN, ROOMS 'A'



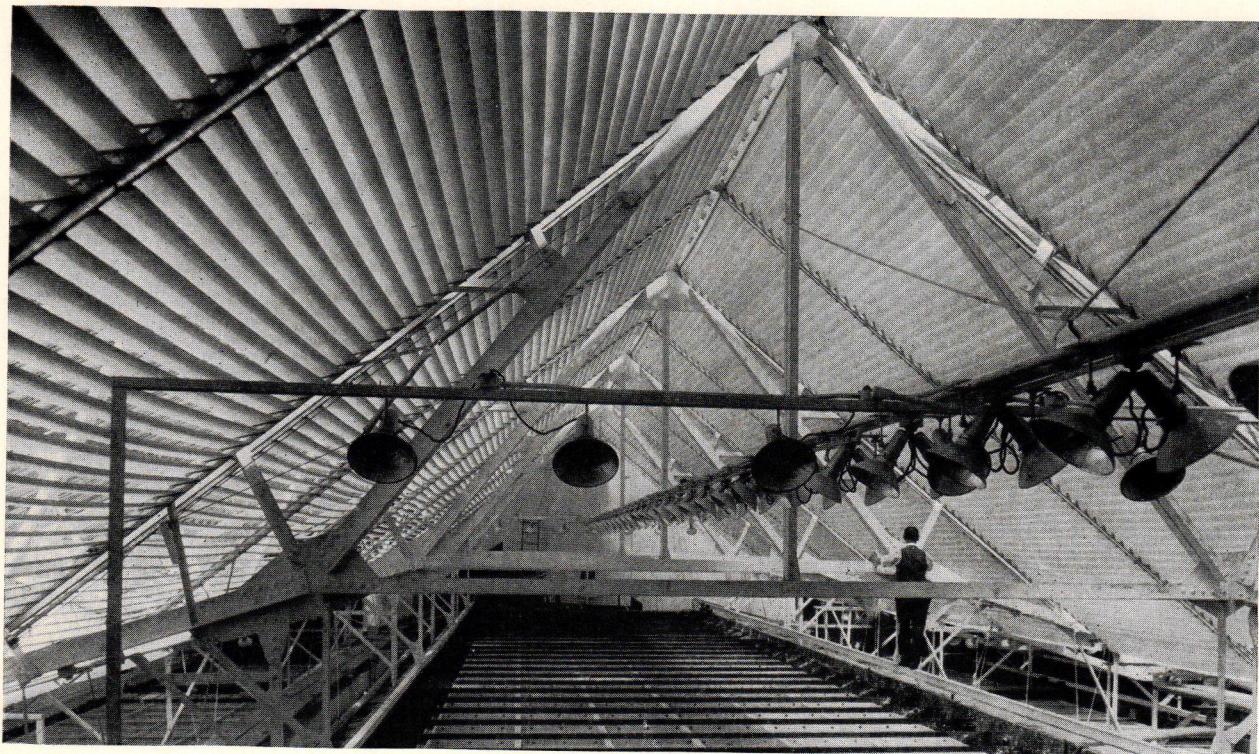
TOP-LIGHTED GALLERY WITH MOBILE PARTITIONS - SEE PLAN OF 2<sup>nd</sup> FLOOR, ROOMS 'B'  
FLUSH CEILING, LAY LIGHTS BEHIND LOUVRES AND TEMPERED GLASS

DETAILS OF LIGHTING



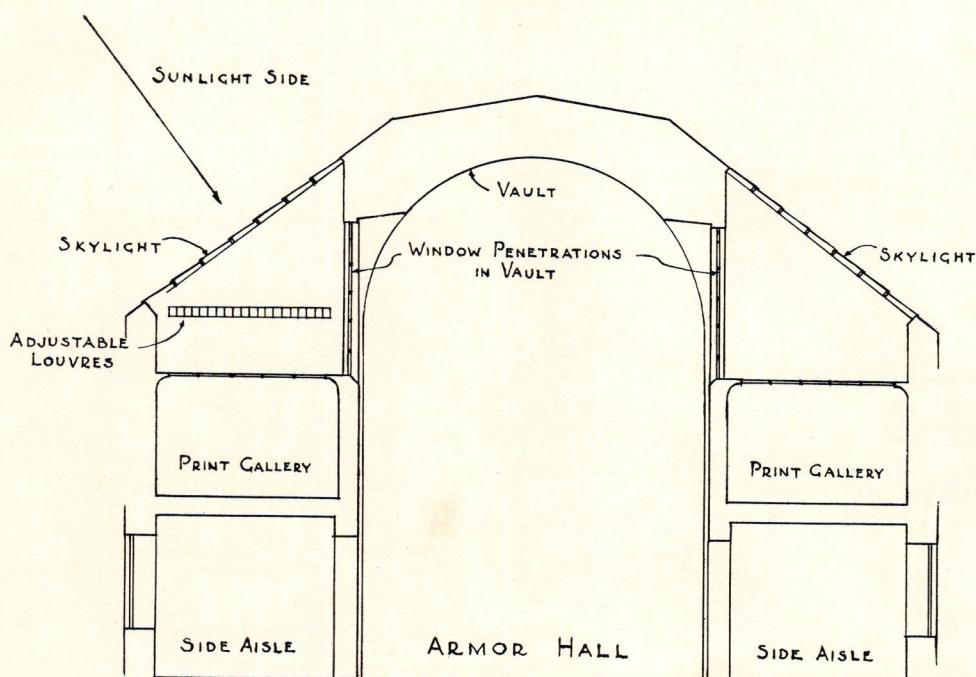
LONGITUDINAL SECTION

STUDY OF GALLERY LIGHTING FOR AN ART MUSEUM



George Van Anda

This photograph of adjustable narrow-strip louvres, or Simon Ventilators, and the system of night lighting installed between ceiling sash and skylights, was made over a top-lighted gallery of the Yale Gallery of Fine Arts, Yale University, New Haven, Conn., for which Egerton Swartwout, New York, was the architect, and French & Hubbard, lighting engineers. The louvres on each side are operated by a crank or lever on the floor below and, with the lighting, might be controlled by an electric eye in an ideal installation. The diagram below shows the design for lighting the new Armor Hall at the Metropolitan Museum of Art, New York City, with skylights transmitting light for print galleries as well as for penetrations in the vaulted ceiling



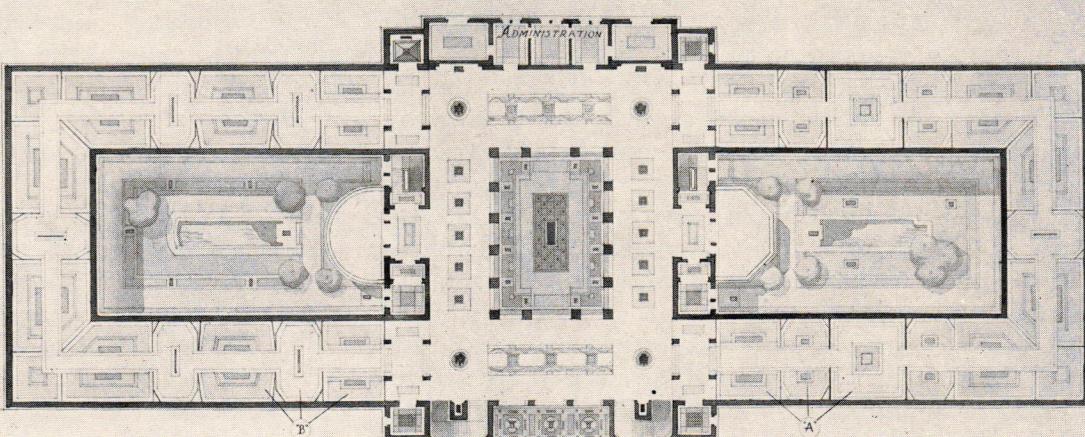
museum, the vertical window is perhaps the best. The attempt to light by a clerestory is usually unsatisfactory, as a great height of ceiling is required and much wall space is necessary above the objects displayed. With such conditions the room becomes so large that it is difficult to establish a good relation between the size of the exhibits and the proportions of the room, when the scale of the former usually suffers. In the inverted monitor of the Seager system, the shape of the room section is poor and the lower and darker central portion is weighty.

Vertical window lighting for three-dimensional objects such as sculpture, furniture, glass, etc., also has faults but with careful study they can be minimized. Only one window should be allotted to each space or room, as more than one will cause reflections. Splayed sides of the room, besides affording varied sizes and shapes, receive better light and help reduce the reflections which occur most often

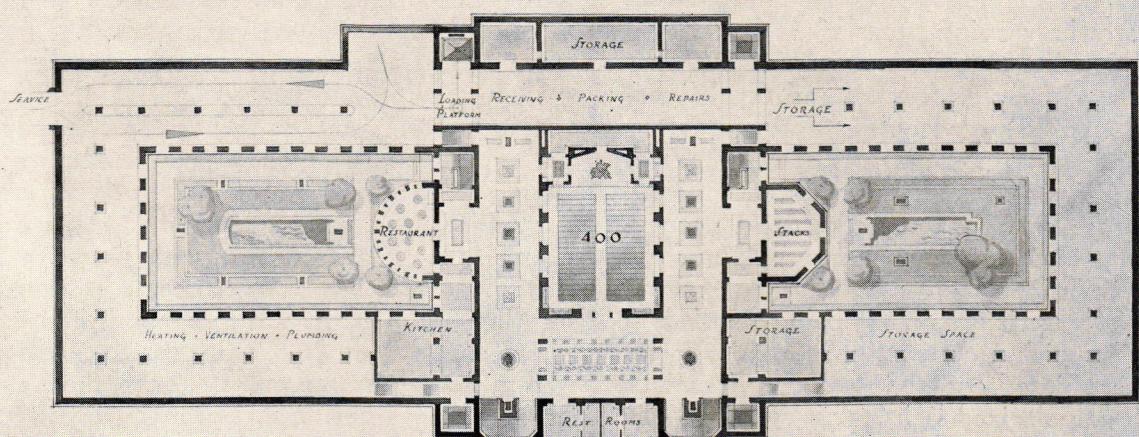
on the side opposite the window. It is recommended that the doors to the room be placed in the poorly lighted areas, generally near the window, to save the best lighted areas for the exhibits. The head of the window should be high enough to light the upper parts of the walls, and the sill below the eye level, so that the visitor can have a view of the outdoor exhibits and landscaping. The tiring effect of being enclosed in a building is a common fault of museum design. The relief and rest obtained while pausing to enjoy a view outside is an aid in making the visit more pleasant.

Artificial night light for a room with vertical windows should come from lights concealed in the jambs or head of the windows, as it is usually better to have both natural and artificial light emanate from the same points. The night lighting in the remodelled sections

*The plans of Grossi's museum design show his ingenious and practical handling of museum requirements*



PLAN OF SECOND FLOOR



PLAN OF BASEMENT FLOOR.



Bulletin des Musées de France

*At night, the treasures of the Louvre in Paris are illuminated by artificial light from the same direction as the natural light admitted during the day through vertical windows*

of the Louvre in Paris is well done in this manner. The sources of the light are concealed and in instances where the back wall of the room is far from the windows, supplementary cove lighting is used to furnish the necessary foot candles. In the center of some rooms, objects such as an urn on a high pedestal or a tall column displayed for archaeological as well as aesthetic reasons house concealed light sources which illuminate the ceiling of the room.

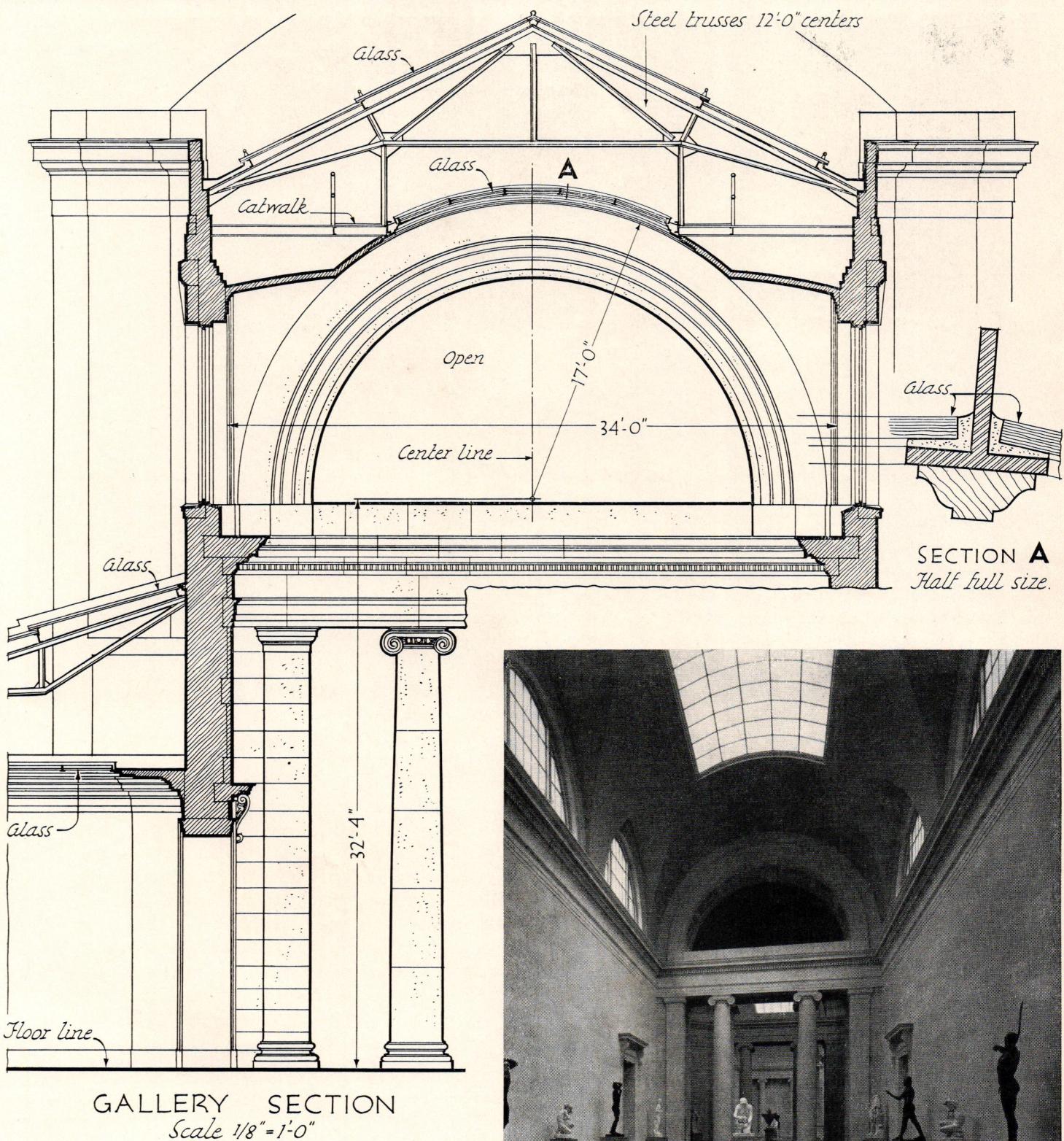
The success of a building lighted only by the usual artificial light is problematical. A large, artificially-lighted building can be depressing and lacking in relaxation for the visitor. This type of lighting is actually only a substitute for natural light and because no windows are used it creates the unpleasant psychological effect of being walled-in. A small museum or perhaps some parts of a large one can be lighted in this manner, which does have redeeming features deserving of consideration. Artificial light is not subject to difficult control as are the varying types of daylight. This type of lighting permits imaginative and dramatic use of concealed, spot, and flood lighting, and is readily adaptable as a feature in the design of the interiors. The New York World's Fair in the coming year promises to demonstrate advanced technical and decorative efforts in the artificial illumination of exhibition buildings.

A new material which is being studied in connection with museum lighting is Polaroid, a film capable of controlling light vibrations to produce polarized light. This type of light has long been known in the laboratory but not until the invention of Polaroid has it been practical to obtain in units of large size. Polaroid has a special crystal alignment and ap-

pears to be similar to cellulose acetate. It can be used by itself or between laminations of glass. For museum purposes this material can be adapted to daylighting only when the varying conditions are minimized, and louvres or other devices are used to control the direction of the light rays. Its use in an artificially-lighted building already seems feasible, as recent experimentation has shown it to have great merit.

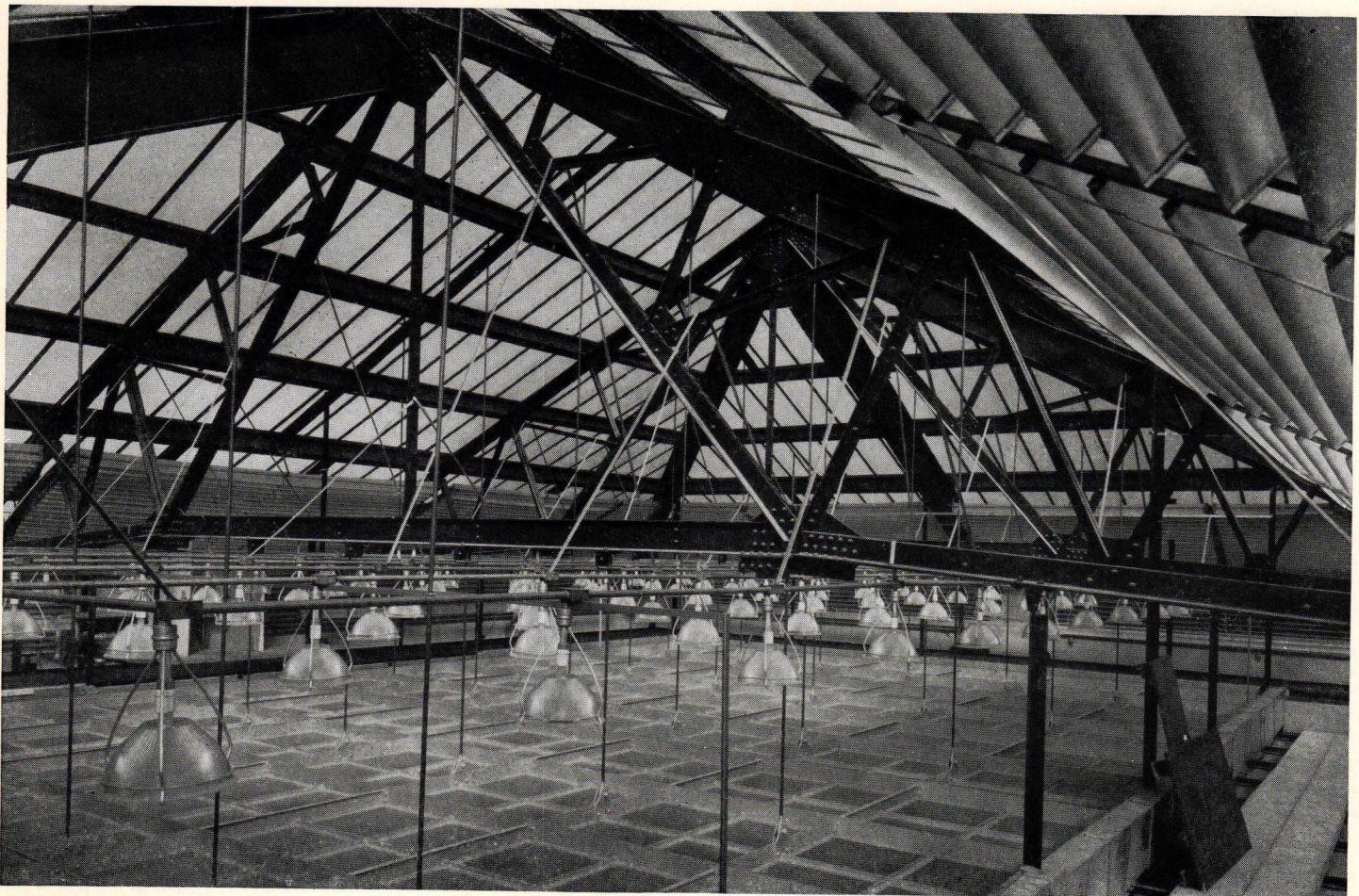
The advantages obtained with the use of Polaroid are the removal of glare from the transmitted light; the reduction of reflections to a minimum; and the appreciable enrichment of the colors in the paintings, for they are seen in their true tones when the disturbing glare is nullified. Sloping louvres also may be used below the sheet of Polaroid to control and direct the rays of the artificial light to the walls. Then, too, this material seems to lend itself remarkably well to the spot lighting method of illumination of paintings. If these worthy results can readily be obtained in practice, it seems reasonable to expect extensive use in future artificially lighted buildings.

Due to the complex factors to be studied: the type of exhibits, the varying light conditions, and the different lighting techniques, the subject of museum lighting is a large field of study in itself. In this there is room for improvement, for though each system of lighting has merit of some degree, it is usually not without fault. It remains for the architect and museum curator, with the technical assistance of the lighting engineer, to investigate recent contributions in this field, to assimilate the desirable qualities, and to adapt them according to the requirements of the gallery which then is under consideration.



ROMAINE, WALKER & JENKINS  
LONDON  
JOHN RUSSELL POPE *Architects*

# C O M P A R A T I V E D E T A I L S

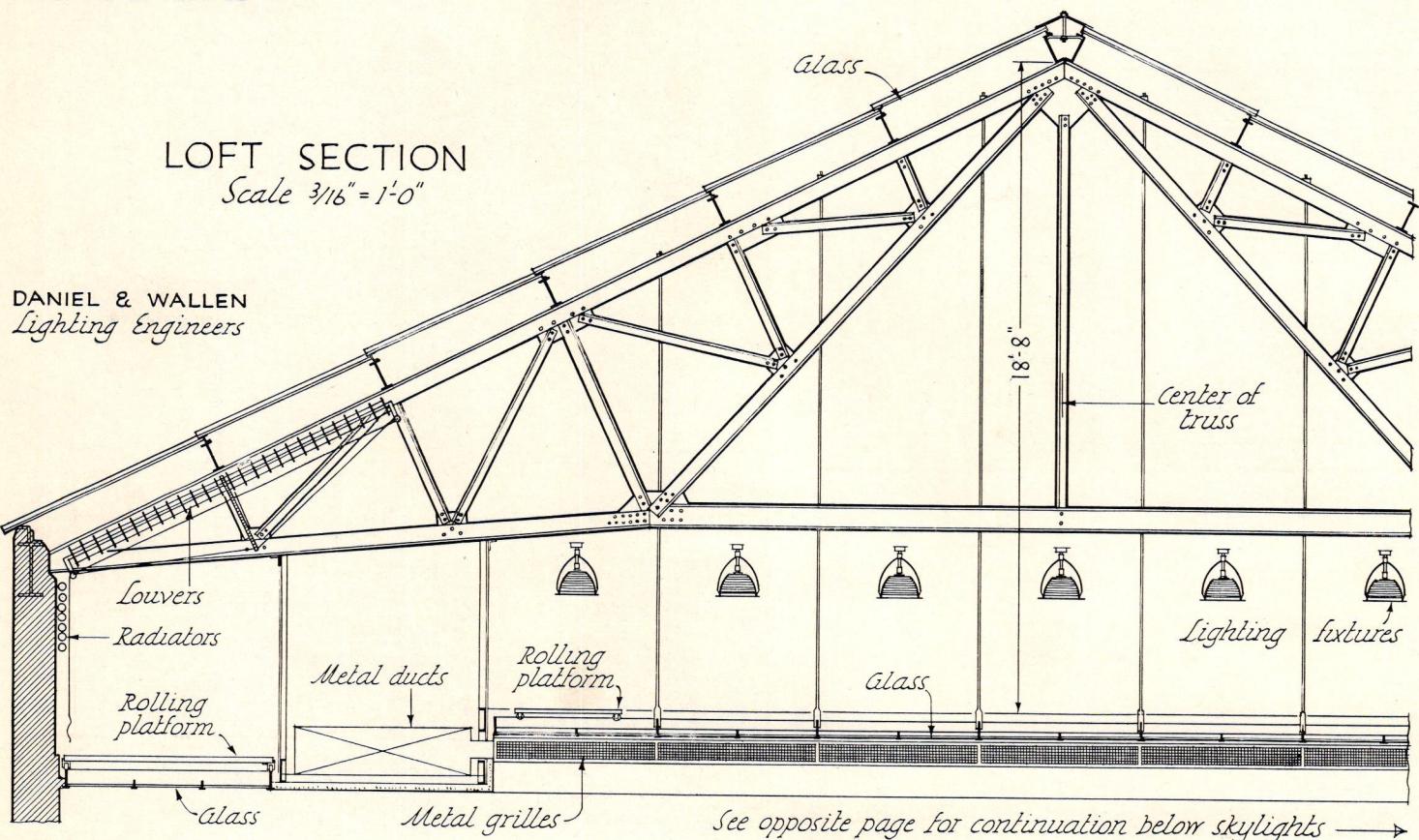


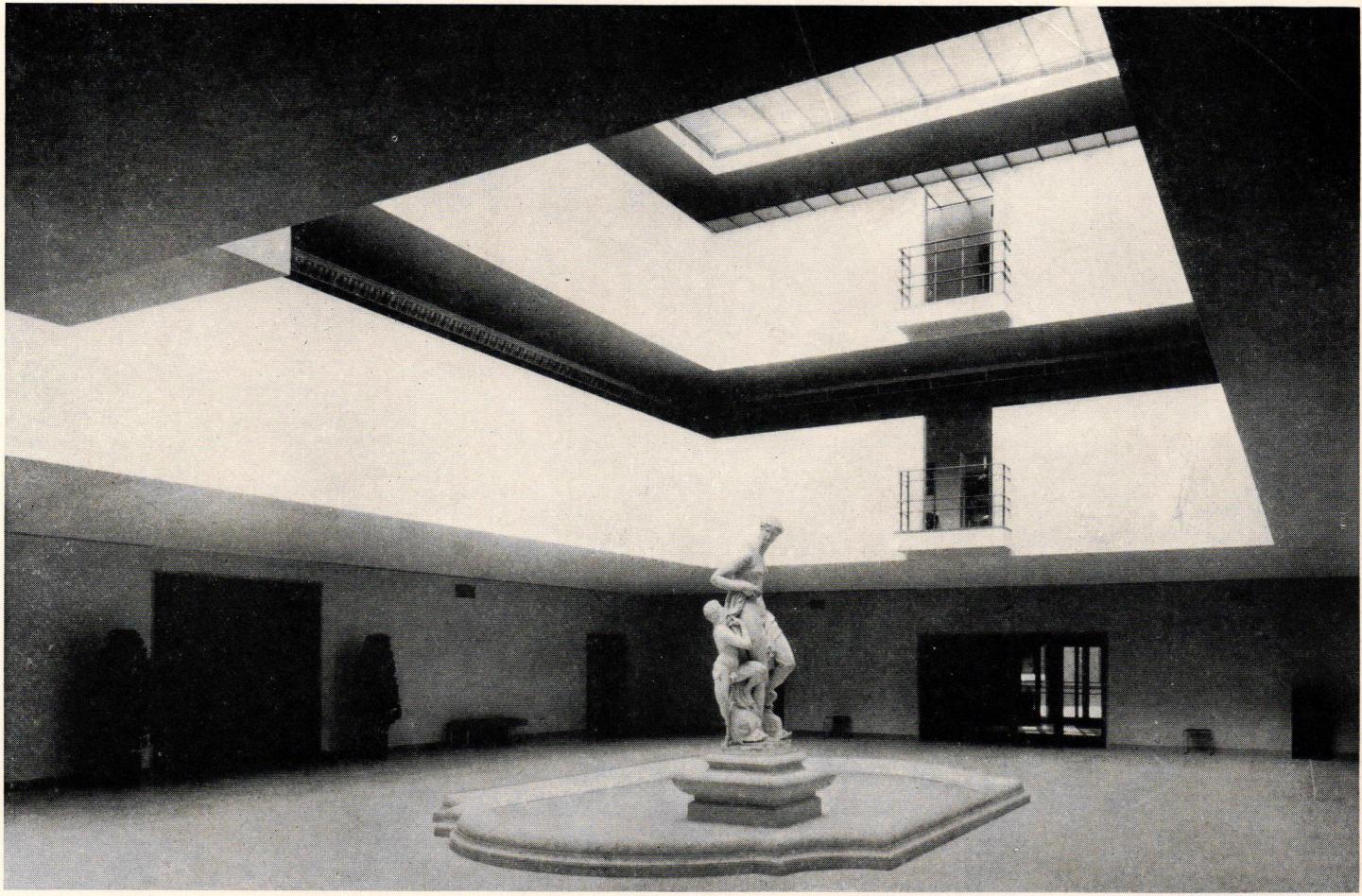
THOMAS B. TEMPLE

## LOFT SECTION

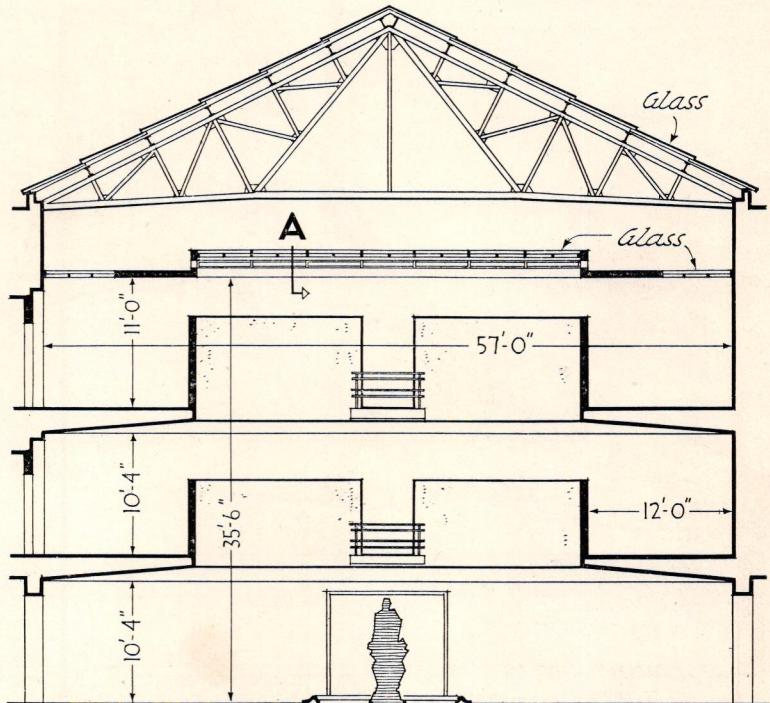
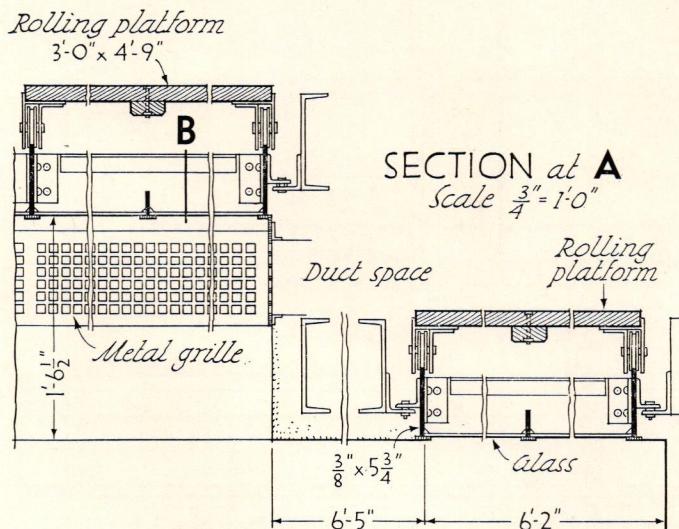
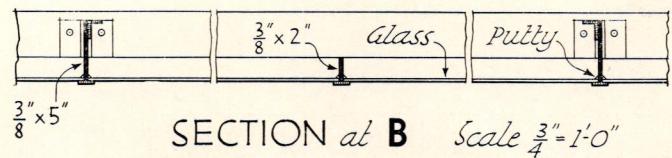
Scale  $3/16" = 1'-0"$

DANIEL & WALLEN  
Lighting Engineers



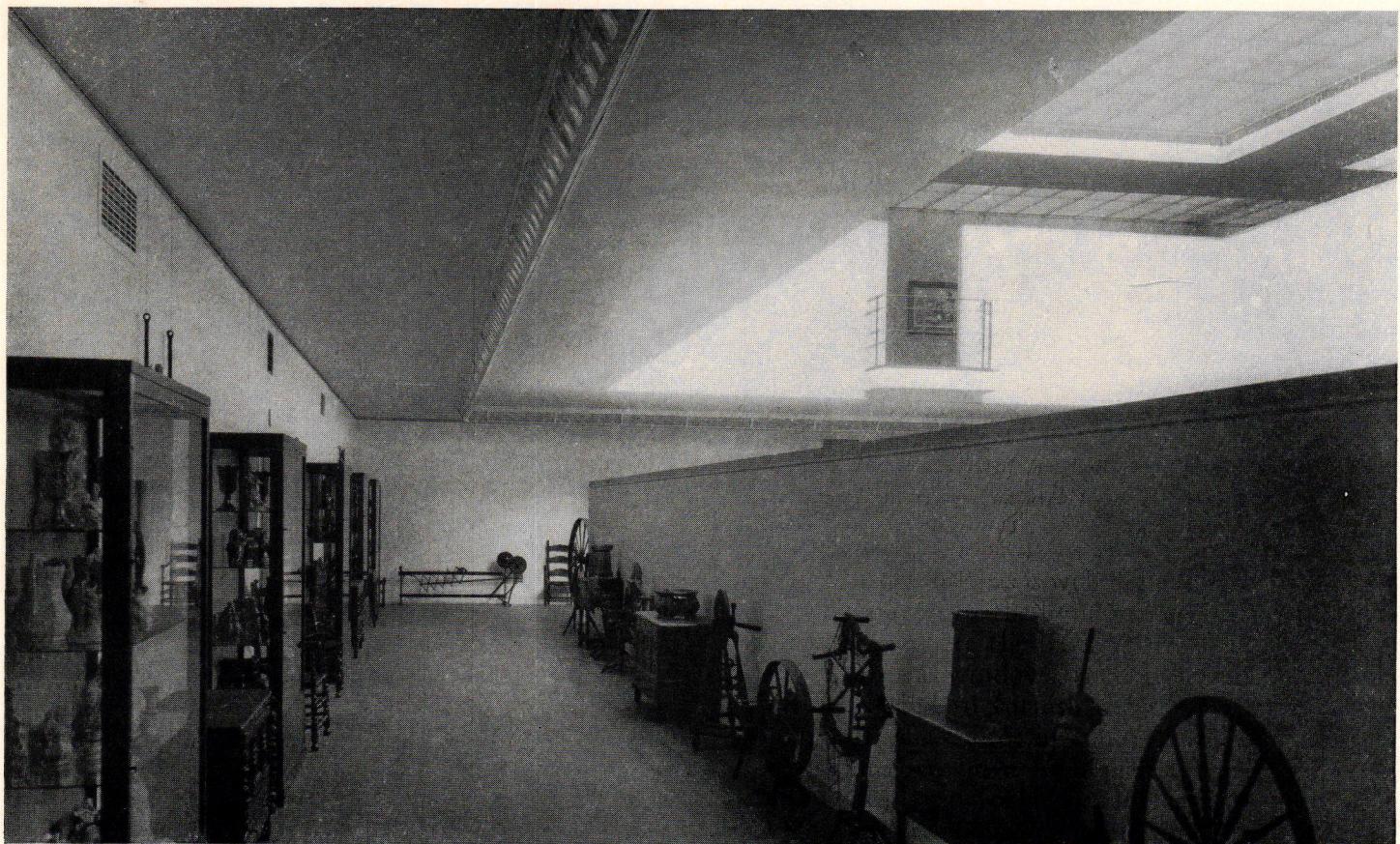


THOMAS B. TEMPLE

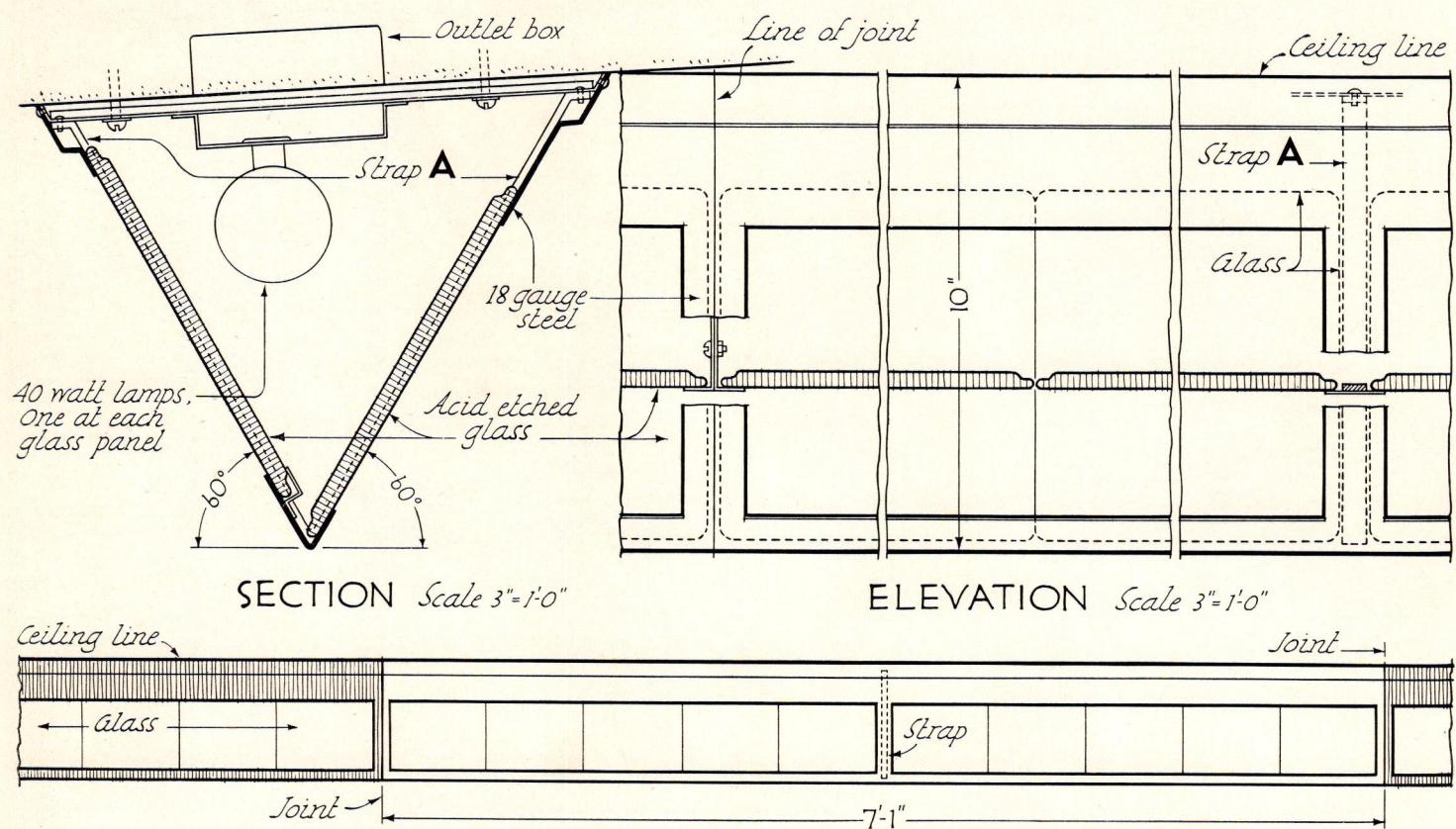


MORRIS &amp; O'CONNOR Architects

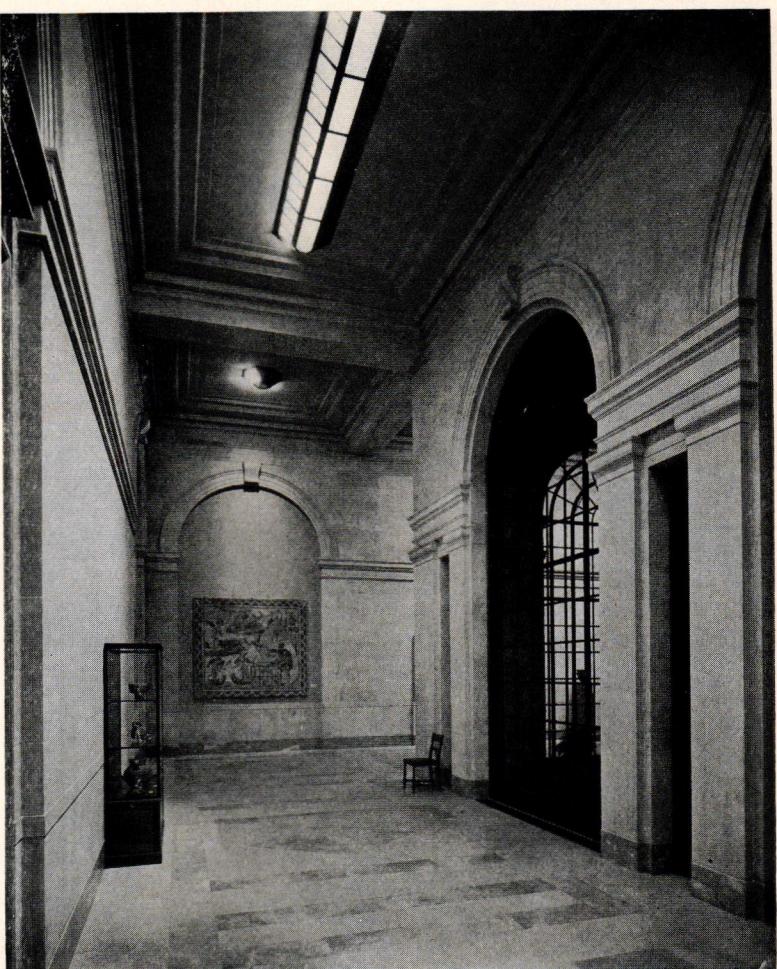
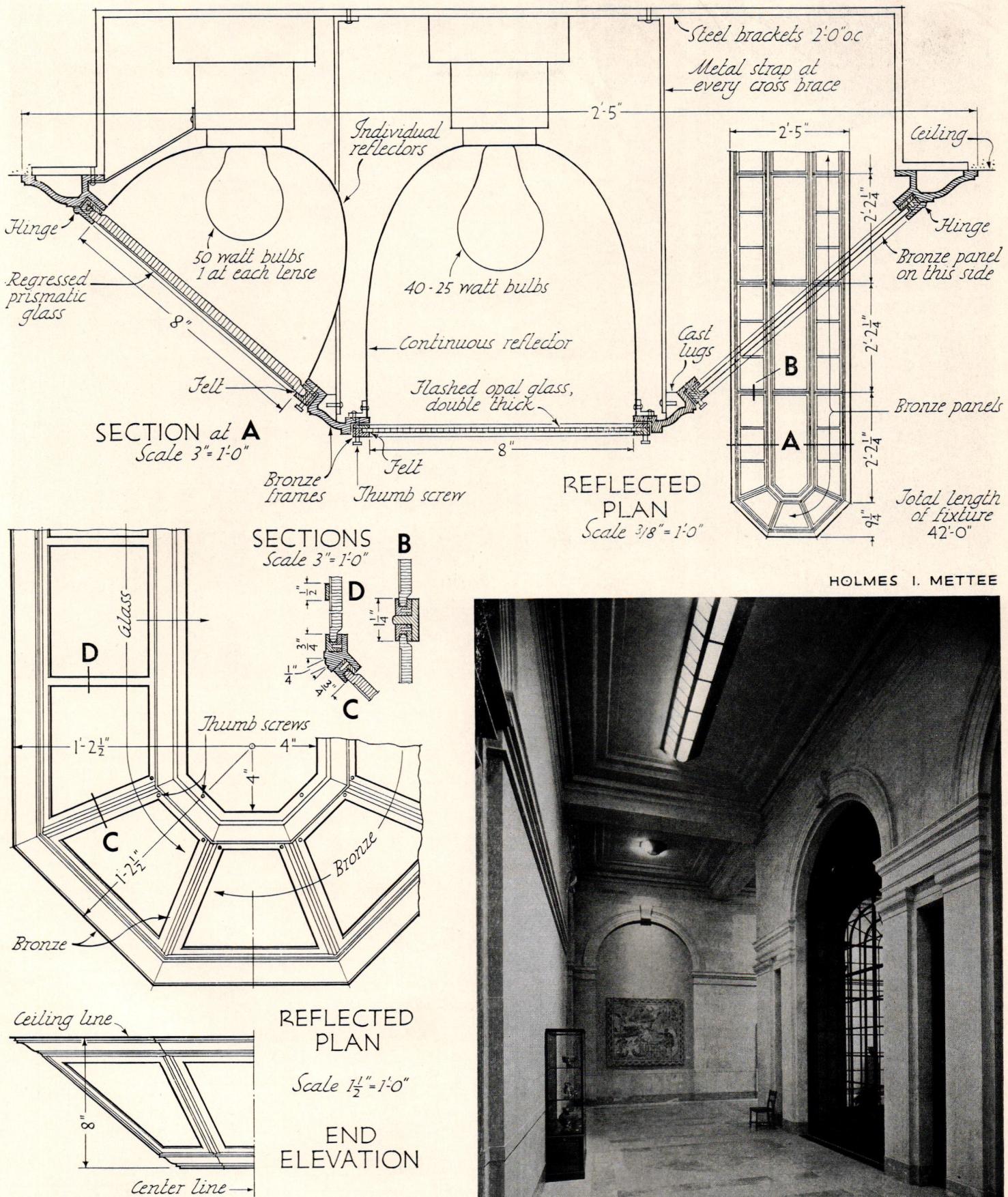
# C O M P A R A T I V E D E T A I L S



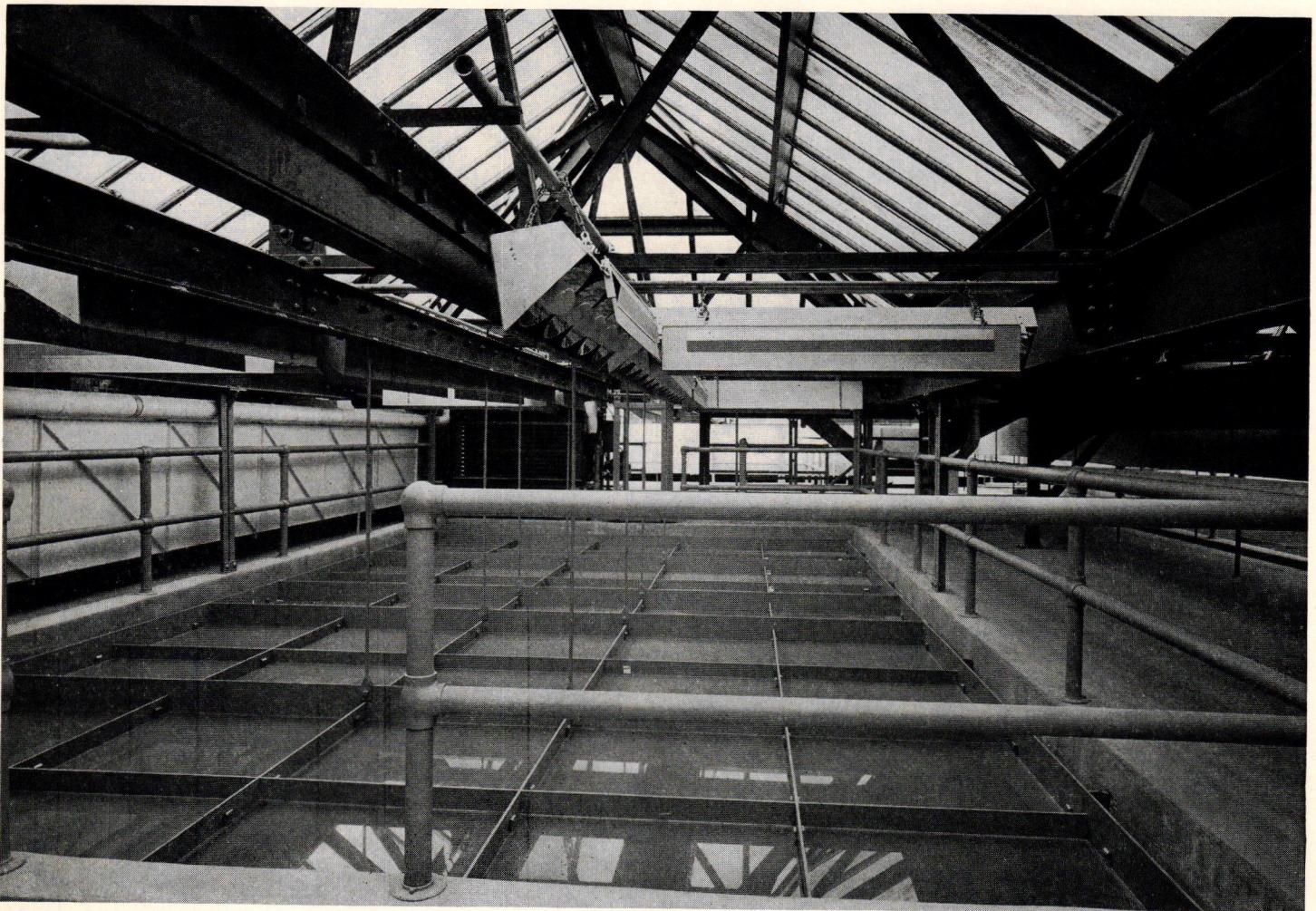
THOMAS B. TEMPLE



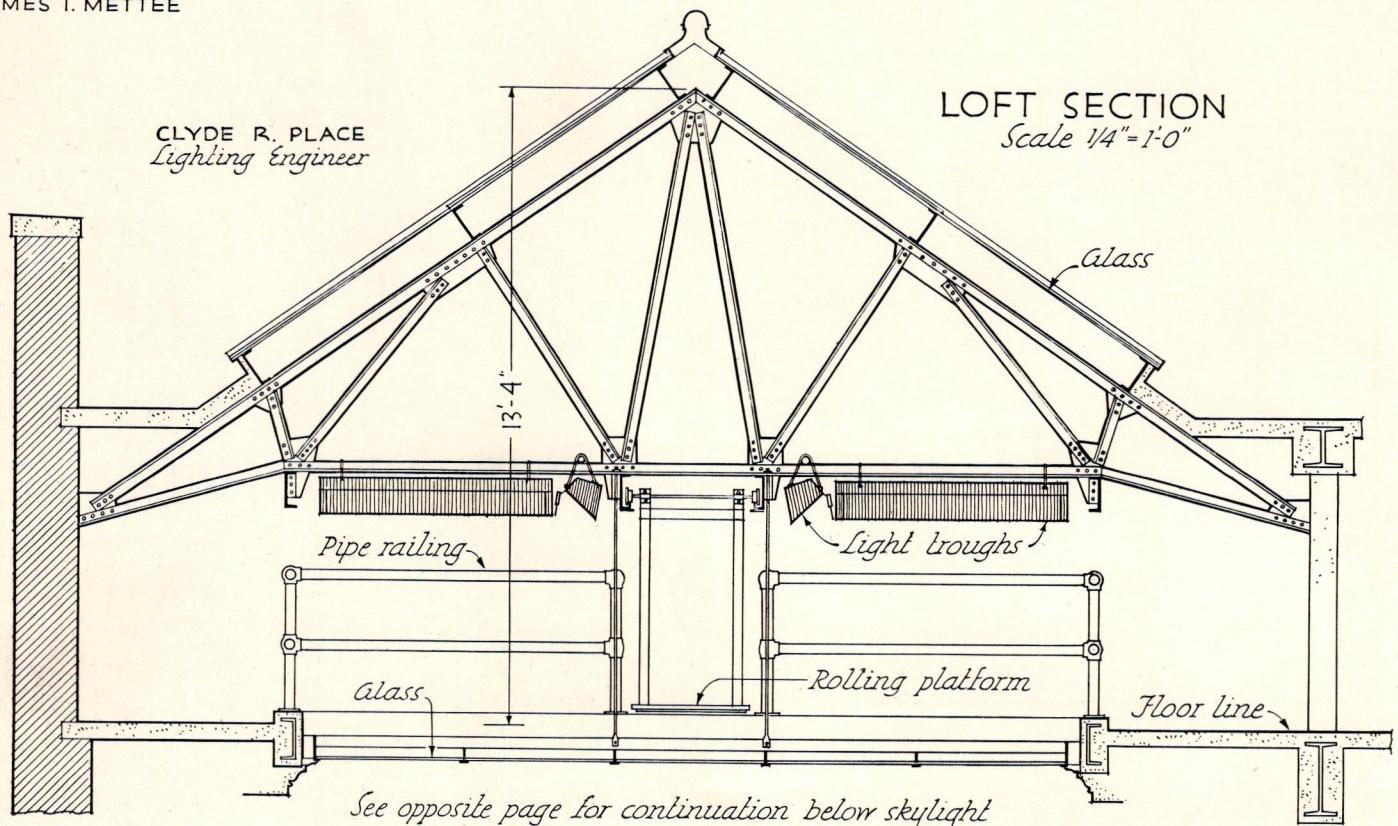
MORRIS & O'CONNOR Architects

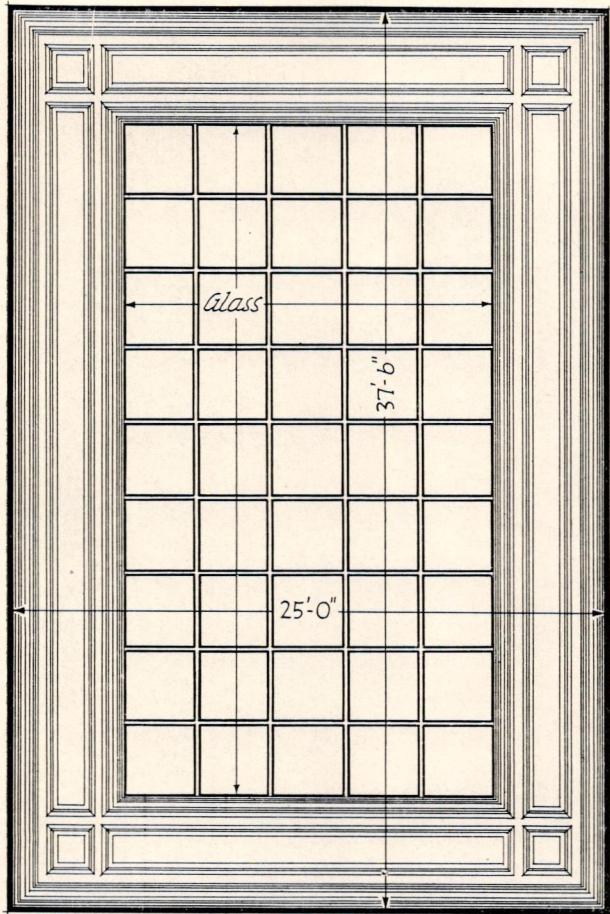


# C O M P A R A T I V E D E T A I L S

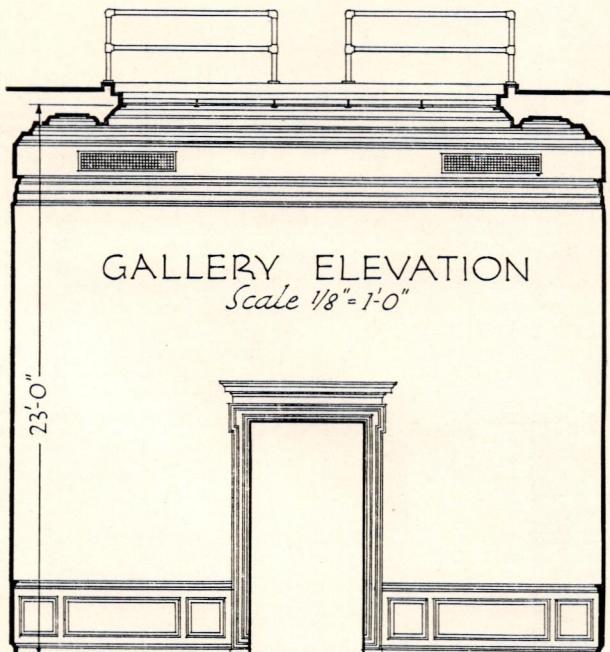


HOLMES I. METTEE

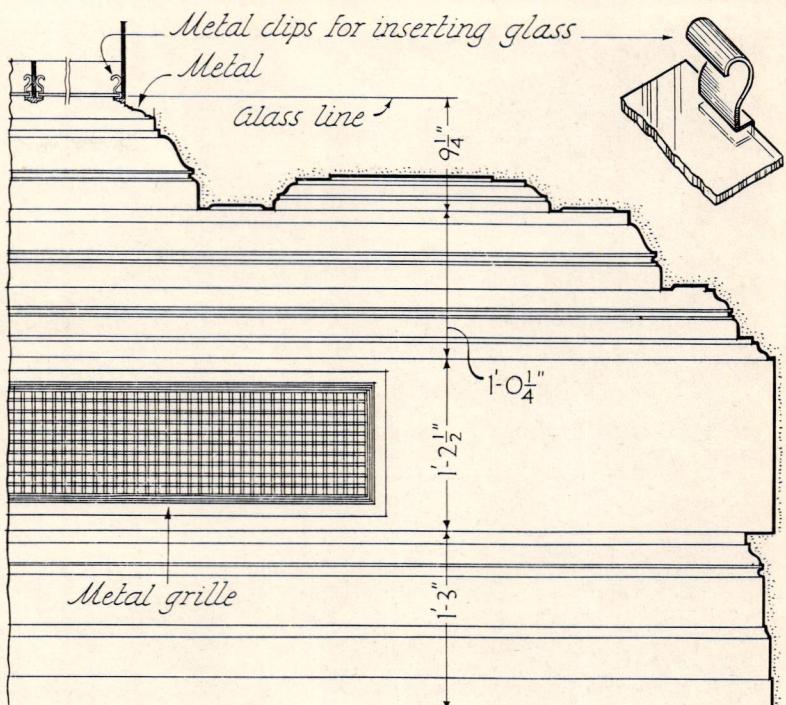




CEILING PLAN  
Scale  $1/8"=1'-0"$



GALLERY ELEVATION  
Scale  $1/8"=1'-0"$



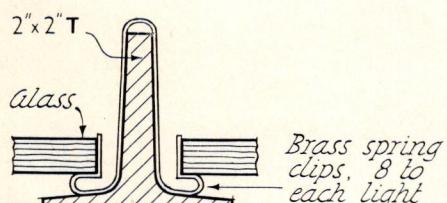
CORNICE DETAIL Scale  $3/4"=1'-0"$

HOLMES I. METTEE

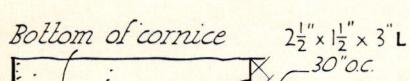


JOHN RUSSELL POPE *Architect*

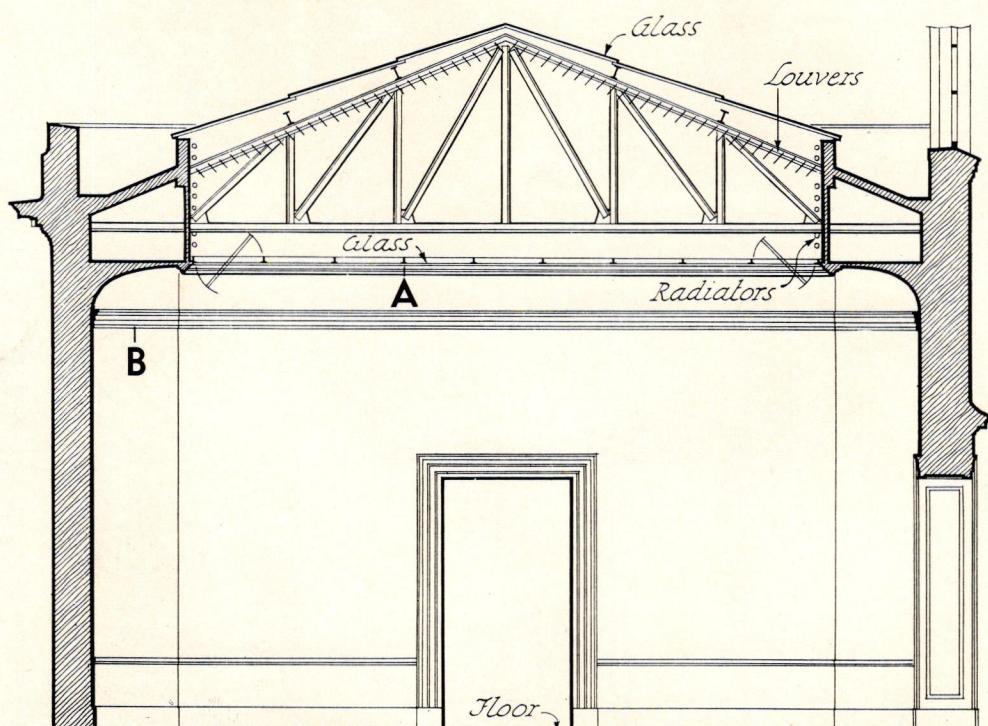
# C O M P A R A T I V E D E T A I L S



SECTION at A



SECTION  
at B  
Half full size



MCKIM, MEAD & WHITE, Architects

TYPICAL SECTION  
Scale 1/8" = 1'-0"

# PENCIL POINTS DATA SHEETS

*Prepared by* DON GRAF, B.S., M.Arch.

# DISREGARD OF THE OBVIOUS

We submit as a typical gem of expository writing the following paragraph from the much-touted new New York Building Law. There are roughly 400 pages of similar material which required a period of several years to produce by the combined genius of a legion of politicians, building experts and hangers-on.

Various national agencies have made extensive studies of the high cost of building in this country. There are the costs of materials, of labor and of financing. We respectfully suggest that there are at least three other hidden wastes which are involved. In a year, the national total must be staggering.

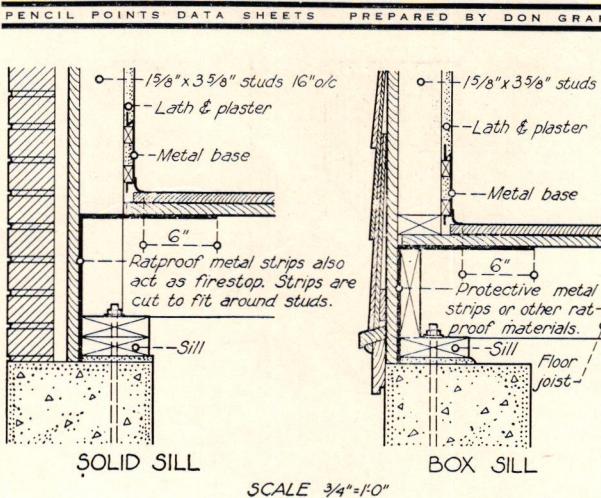
The difficulty of dealing with city building departments in order to get drawings approved is Item One. Second, the ridiculous and extravagant requirements of many city building codes. Third, we have the cost of

translating such stream-lined English as the following:

QUOTE: The provisions of this article shall apply only to converted dwellings, both class A and class B whether heretofore or hereafter converted, and whether or not a certificate of occupancy for such converted use has been heretofore issued, except that every such dwelling heretofore converted in accordance with the requirements of or plans filed with and approved by the bureau of buildings or the department charged with the enforcement of the tenement house law, and every such converted dwelling heretofore converted to a Class B multiple dwelling, and every such dwelling heretofore converted not exceeding three stories in height and not occupied by more than two families on any one floor or more than three families in all, if such dwelling complies with this section and sections one hundred and seventy-two-a, one hundred and seventy-six, one hundred and seventy-seven, one hundred and eighty-five, one hundred and eighty-seven, one hundred and eighty-eight, subdivisions two and three of section one hundred and eighty-nine, sections one hundred and ninety, one hundred and ninety-two, two hundred, and section two hundred and one of this article, shall not be required to comply with any other section of

## RAT PROOFING FRAME BUILDINGS

Index No.  
**F 5 f**  
CONSTRUCTION



SET  
**14**  
SEP  
1938

The following precautions, in addition to usual good construction, should be employed to render a building ratproof. *Cellar steps*—should be of open type. *Hollow walls above cellar*—must be protected from invasion from cellar, intermediate floors or attic. (See drawings herewith.) *Pipe lines*—should have ratproof metal collars. *Decorative grilles*—should have no openings greater than  $\frac{1}{2}$ " and if openings exceed this amount, a metal screen should be installed behind grille.

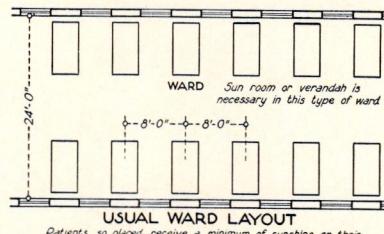
Rats require large and constant amounts of food as well as quiet and well-protected places for hiding and breeding. Interfere with these requirements and the rats' existence becomes perilous. The elimination of rat hiding places exposes the animals to the attack of man and domestic cats and dogs.

Reference: See Supplement No. 131 to the Public Health Reports entitled "The Rat and Ratproof Construction of Buildings," for sale by the Superintendent of Documents, Washington, D. C., 15¢.

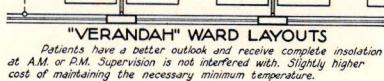
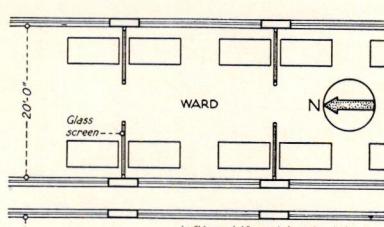
## BASIC WARD LAYOUTS

Index No.  
**D 15 a**  
PLANNING

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF



SET  
**14**  
SEP  
1938



**USUAL WARD LAYOUT.** In this type the long axis of the ward runs north and south with narrow windows and a large amount of wall surface. The percentage of light in this wall is only about 30% so that a sunroom is a necessary addition.

**VERANDAH WARD LAYOUT.** Hospital wards with the beds placed parallel to the long axis of the ward were first developed in Copenhagen. The percentage of light in this wall is 66%. The long sliding windows may be swung back giving a complete open-air effect. The width of the ward is reduced and this decrease in span for floors and roofs will offset the 3% increase in the total cube necessitated by the extra length. The amount of sunshine will average fully 3 times as much in the verandah ward as in the older type. Balconies are eliminated which would shade the windows of lower floors. Supervision of the wards is no more difficult since the upper panels of the partitions are glazed. The patient has the advantage of being in a cubicle with only 3 other people instead of in an open ward exposed to the gaze of 19 other patients.

Material in part thru courtesy of Architects' Journal.

this article. (*Whew!*) All of the provisions of articles one, two, eight, nine, ten and eleven, and sections twenty-seven, twenty-eight, thirty-six, forty, fifty-six, fifty-seven, fifty-eight, fifty-nine, subdivision two of section sixty-two, seventy-eight, eighty, eighty-one, eighty-two and eighty-three of this chapter shall apply to all converted dwellings; and no other sections or articles of this chapter, except as in this article specifically provided, shall apply to such dwellings. Every alteration required by the provisions of this article in dwellings heretofore converted, whether or not a certificate of occupancy for such converted use has been heretofore issued, shall be made on or before April eighteenth, nineteen hundred thirty-three and shall not be required to be made before said date unless the department charged with the enforcement of this chapter shall direct that any such alteration shall be made prior to said date in order to safeguard the life or health of any occupant of such dwelling and in case such department shall so direct such alteration shall be made on or before the date specified in such direction. UNQUOTE.

How Cicero or the proverbial Philadelphia lawyer might envy that first sentence!

\* \* \* \*

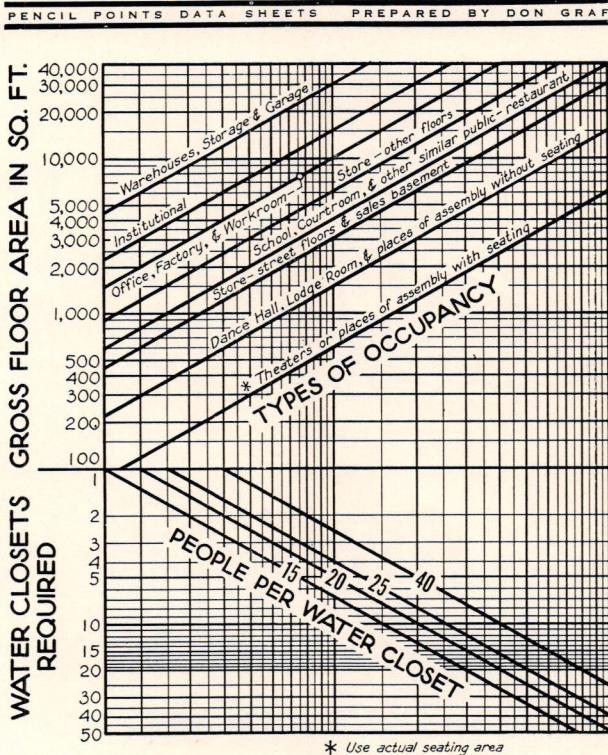
DATA SHEET DOINGS. New issues of manufacturers' material that you should have in your *Data*

Sheet Library are the *Data Sheets* sponsored by the El-  
kay Manufacturing Company, Chicago, on high quality  
stainless steel sinks and cabinet tops; A set of 6 *Data  
Sheets* describing kitchen planning principles, from the  
Mutschler Brothers Company, Nappanee, Ind.; and the  
Arkansas Soft Pine Bureau of Little Rock, Arkansas,  
will be glad to send you a set of 8 *Data Sheets* in which  
this soft-textured lumber is described in architectural  
language that you can understand without having to  
make a life study of the lumber business.

Sometime when you have nothing to do, just try to  
find some dope on hydraulic elevators in any of the  
standard architectural reference books. The *Data Sheets*  
here and now claim any reward that has been posted for  
making such information available. You can get a set  
of 6 *Data Sheets* from the Rotary Lift Company, Mem-  
phis, Tennessee, telling you how much space to allow,  
how to construct the pit and all the other things that  
you will want to know when planning for freight-  
passenger elevators, sidewalk elevators or dumbwaiters.

## TO DETERMINE FIXTURES FROM FLOOR AREA

Index No.  
**E 1 h**  
MECHANICAL



First—read across from floor area to curve for type of building.  
Second—at intersection read down to curve for number of persons per toilet as specified in the local code or as judged desirable. (15 persons per toilet represents generous conditions.)

Third—from this intersection read to the left for the number of water closets required.

Fourth—determine the probable sex proportion and divide the number of toilets found, in a suitable ratio, remembering that urinals in the men's toilet room augment the facilities offered by the water closets and makes relatively fewer water closets necessary for men than for women. For schools, allow 1 toilet to 25 girls, and 1 toilet to 40 boys.

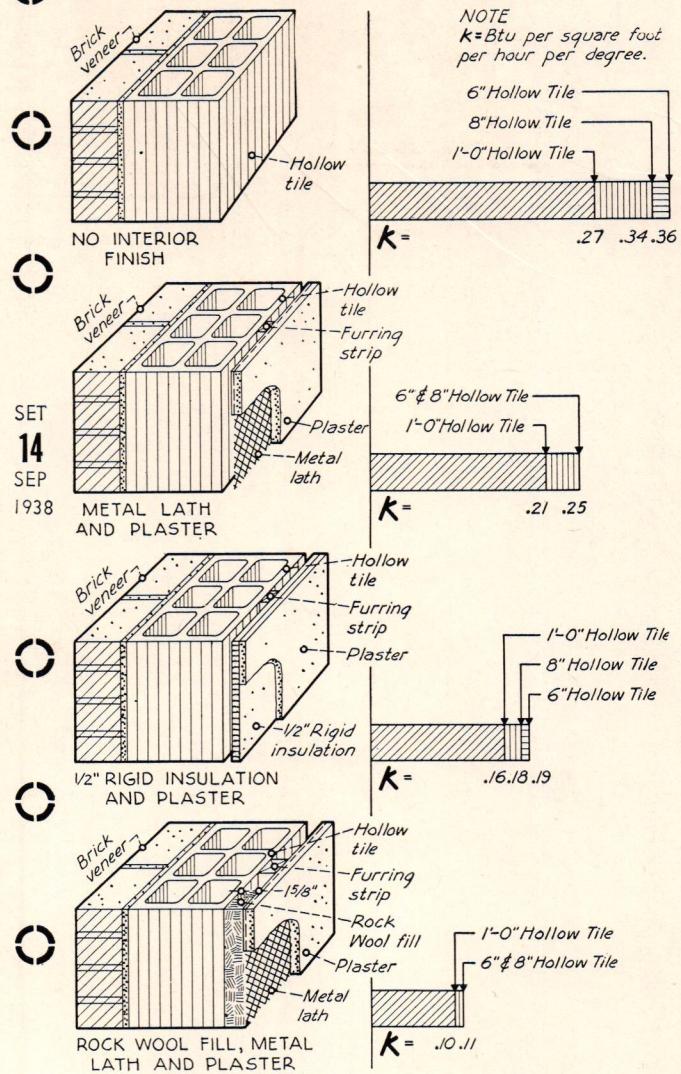
Fifth—apportion urinals and lavatories as follows:

Type of Building	Urinals to 1 Closet	Lavatories to 1 Closet
Theaters	1 1/2	1/2 to 1
Office Buildings	1/2 to 1	1 to 1 1/2
Schools (boys' room)	1	1
Schools (girls' room)	1/2	1/2
Other Buildings	1	1/2 to 2

## HEAT LOSS COEFFICIENTS MASONRY WALLS

Index No.  
**E 2 i**  
MECHANICAL

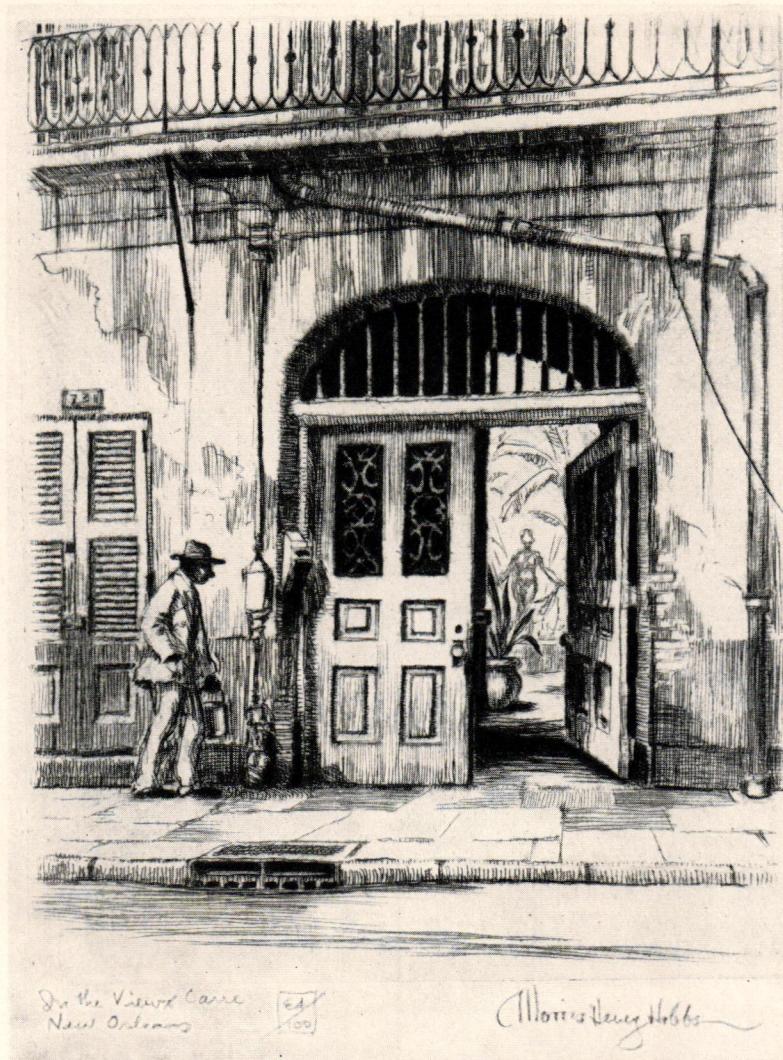
PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

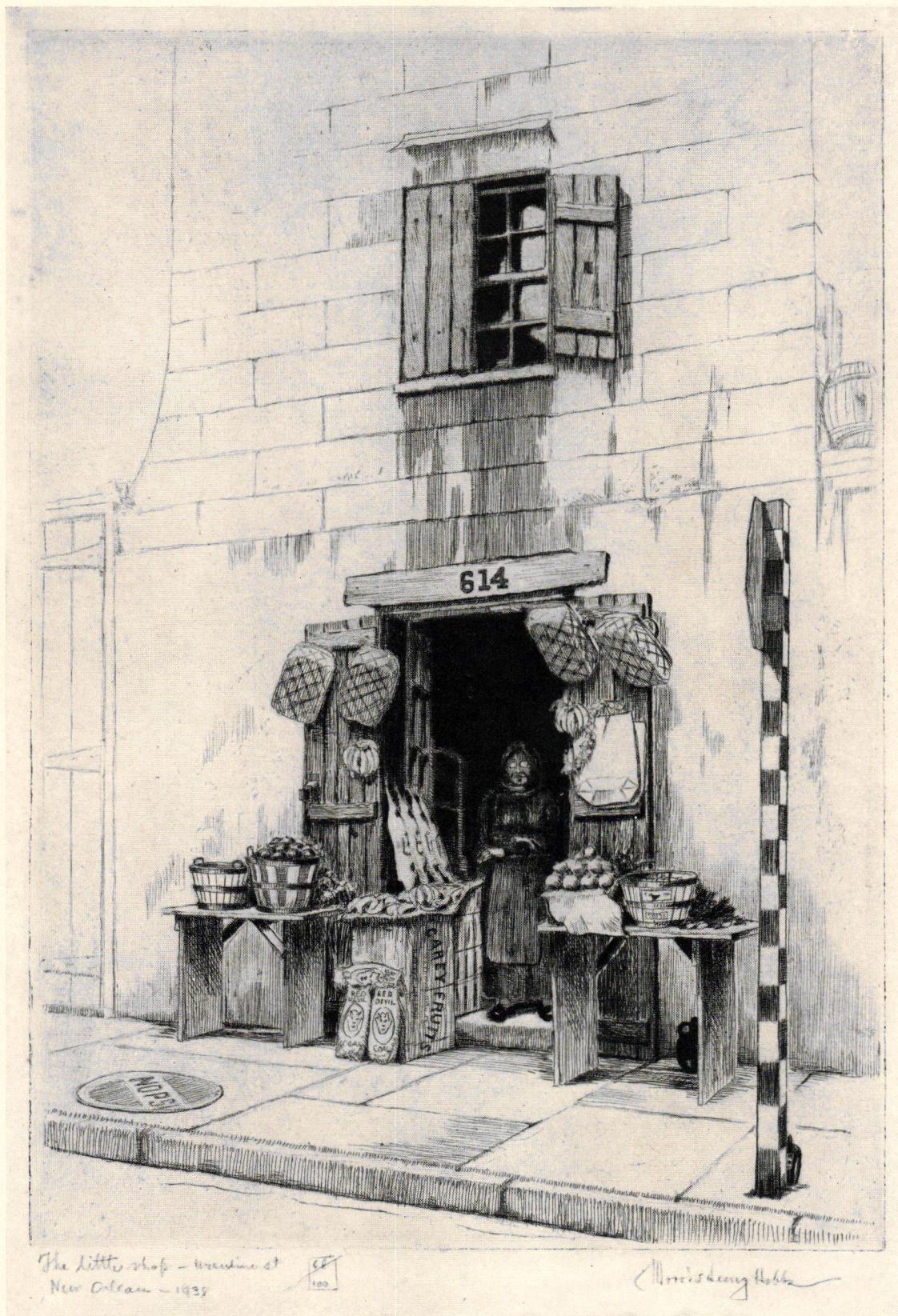


# FOUR RECENT PRINTS

BY MORRIS HENRY HOBBS

*The mastery of an exacting technique attained by Morris Henry Hobbs, Cleveland architect, in his hobby of print making is demonstrated by four of his most recent prints. The small etching below, reproduced at the original size, depicts with skilled clarity an ancient portal in the Vieux Carre of the New Orleans French Quarter, long popular with artists*



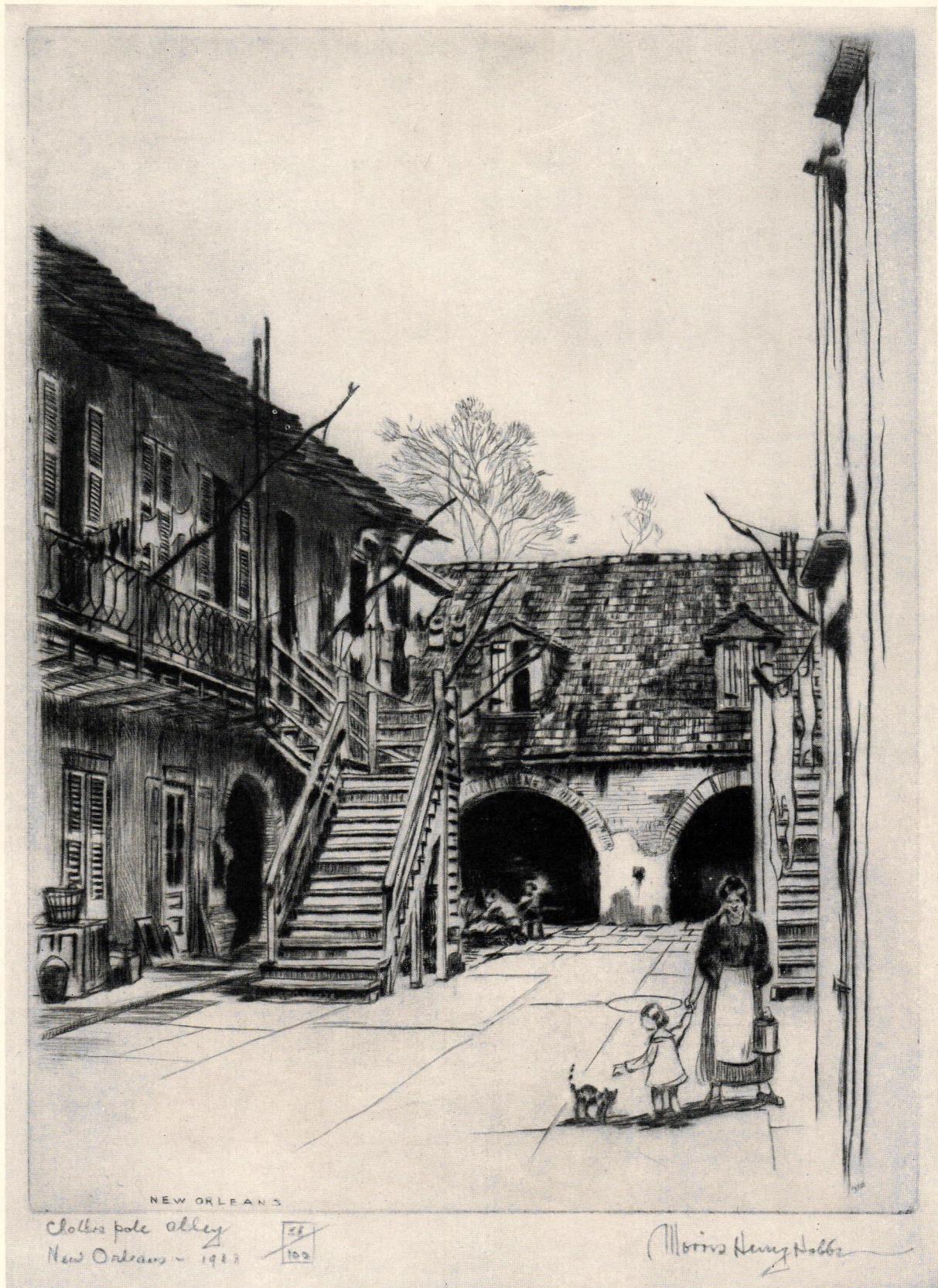


The little shop - Waudine st  
New Orleans - 1938

614  
100

Morissey Hobbs

*The interesting variety of wares and the mysterious interior of "The Little Shop" kept by a crone seen emerging from the deep shadows provided another subject for Hobbs' New Orleans studies, which lend a flavor of age even to an obtrusive traffic signal on the sidewalk*



In "Clothes Pole Alley," New Orleans, was found this variety of architectural forms with all the marks of a long and hard existence, interpreted by Hobbs in one of his most distinguished drypoints. It is reproduced here at the original size and shows his artistic ability



"Dusting up"

350

Morris Henry Hobbs

*The grace and breath-taking activity of a yachting scene imparts special charm to this etching and aquatint by Hobbs, which he titles "Dusting Up"*

# THE MONOGRAPH SERIES

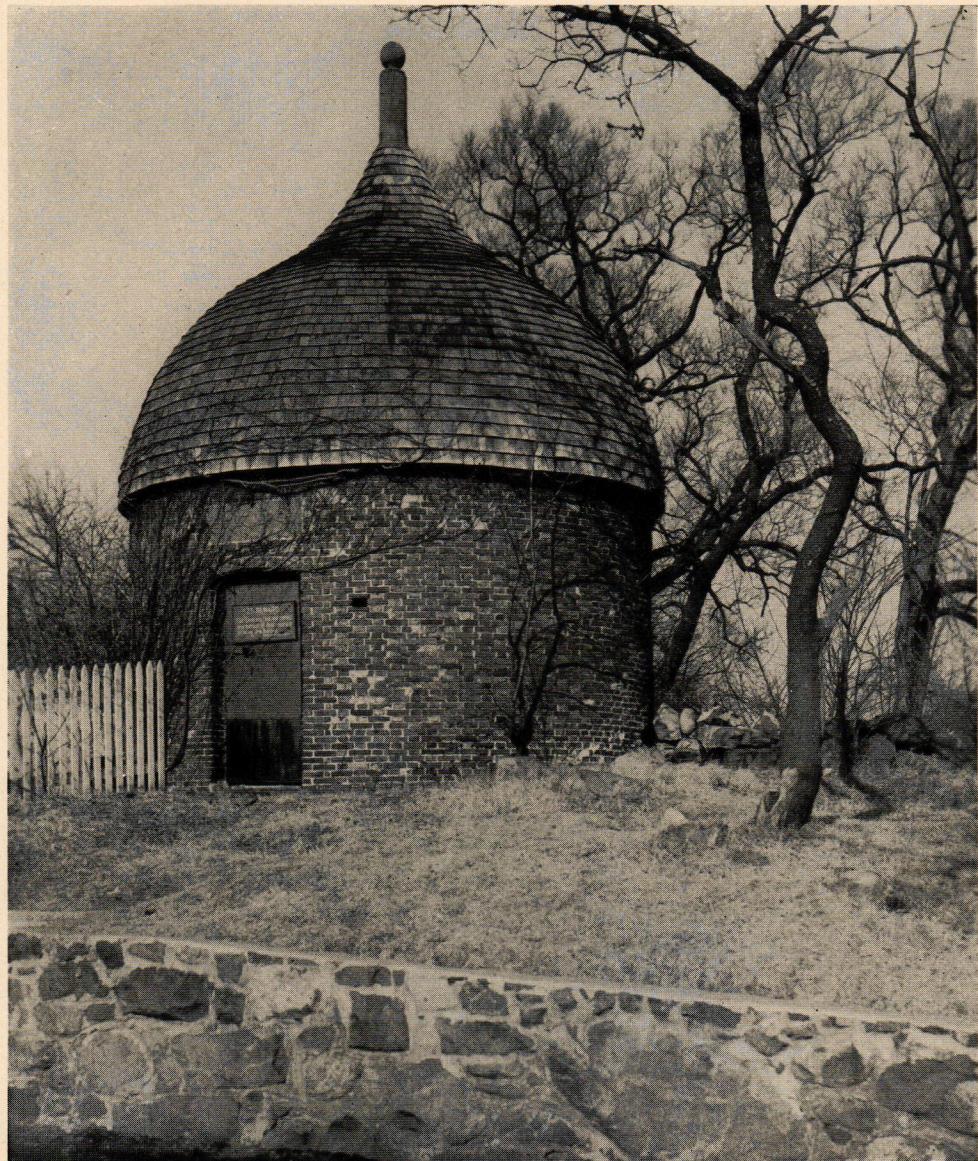
## Records of Early American Architecture

*Edited by* RUSSELL F. WHITEHEAD, A. I. A.

*Measured Drawings by* FRANK CHOUTEAU BROWN, A. I. A., *Associate Editor*

*Photographs by* ARTHUR C. HASKELL, *Architectural Photographer*

*Volume XXIV · Number 4*



"POWDER HOUSE"—1755—FERRY ROAD, MARBLEHEAD, MASS.

〔 145 〕



*(Measured Drawing—Volume XX, No. 3, Page 134)*  
CAPT. ASA HOOPER HOUSE, 5 WASHINGTON ST., MARBLEHEAD, MASS.

〔 146 〕



# Old Marblehead, Massachusetts

by FRANK CHOUTEAU BROWN, A. I. A.

**T**HE early growth of the town was not very rapid. By 1674 the Town records had listed 114 householders; while in Town meeting that same year it was voted that "all these fifteen or sixteen houses built in Marblehead before ye year 1660, shall be allowed one cowes common and a halfe." Most of the "Commons" set apart as public land owned in common by the community in the earlier settled townships of New England were intended either for grazing land, for the use of the cattle of the townspeople, or as a "training field" for the regular meetings of its "train band," the first colonial militia.

Besides its "Training Field," the town early allotted "the Neck" for general use as "Cow Commons." The "Neck" was a rocky peninsula, almost entirely detached from the mainland, except at low tide, when a shallow sand bar from its westernmost end formed the inner limits of the large harbor. A slight obstruction across this natural causeway kept the cattle confined to the grazing area, even at low water. It was this same Neck—which was practically an island at high tide—that gave protection to the larger anchorage that is now known as "the Harbor,"—although in the first hundred years of its settlement, the fishermen and small vessels using the town facilities took advantage of the better protected "Little Harbor," a small bay just back of the promontory crowned by Fort Sewall, at the very foot of "Burying Hill," which was the site of the first settlement.

The importance of this harbor to the early settlement would be indicated by the several forts that were erected for its protection and defence at various times. Most important of these is Fort Sewall, built on the mainland side of the harbor entrance. This position was first fortified in very early times. During King Philip's war, which began in 1675 and continued for three years, this fort and its three large cannon were placed in order, and it has been continued and improved from time to time up nearly to the present day. The structure now to be seen dates from about 1742,

when it was enlarged and reconstructed under Sir Harry Frankland. This position was garrisoned in three important wars and, although again somewhat rebuilt and remodelled in 1864, it still retains the older magazine, along with several old gun emplacements and other features.

Another old fort, known as Fort Washington, was constructed and in use during the Revolution and the War of 1812, on the high rocky bluff overlooking Orne Street, from near the "Old Burying Hill," although, along with an embankment that at one time dominated the causeway, at the southern end of the main harbor, it has long since disappeared. One other earth-work fortification could, until within the last dozen years, be plainly traced at Naugus Head—the tip of the Cape nearest Salem Harbor. The dirt roadway around that headland that served a group of summer cottages cut right through the embankment in two places, and its main outlines were still easily traced, despite the location of some of the houses across and upon its outer slopes.

Along with this group might be mentioned the old "Powder House," a fine example of the town magazine of the time, that was built by vote of the town, in 1755, at the outbreak of the French and Indian War, and continued in use through the Revolution and the War of 1812. It is a handsome example of brickwork, laid in Flemish bond, circular in plan and with a brick-domed top, covered by its "ogee" shingled roof, located on what used to be known as "the Ferry Road." It is about the earliest and best example of a building of this type remaining within the Commonwealth; although the "Gun House," built to house the artillery of the local regiment during the War of 1812, is probably more unique. In its simplicity this unusual building might almost suggest a post-Colonial precedent for the modern garage, if to be built of brick! The principal walls are again laid in an early bond.

This records an unusual number of public buildings, of both age and historic association, still preserved in one small township,—except that no specific mention



ROBIE HOUSE—1729—7 PEARL STREET, MARBLEHEAD, MASSACHUSETTS

〔 148 〕

has yet been made of the old "Town House" (illustrated in Vol. XXIV, No. 2), which was built in 1727 exclusively for that purpose and continued in use until 1877, when Abbot Hall, an ugly brick structure of Victorian type, was built on the old "Training Field" and given to the townspeople for a meeting place. The old Town House formerly had a Market under it on the ground floor level—as was so commonly the case in many sections of old England—which also explains its high basement, now occupied by the local

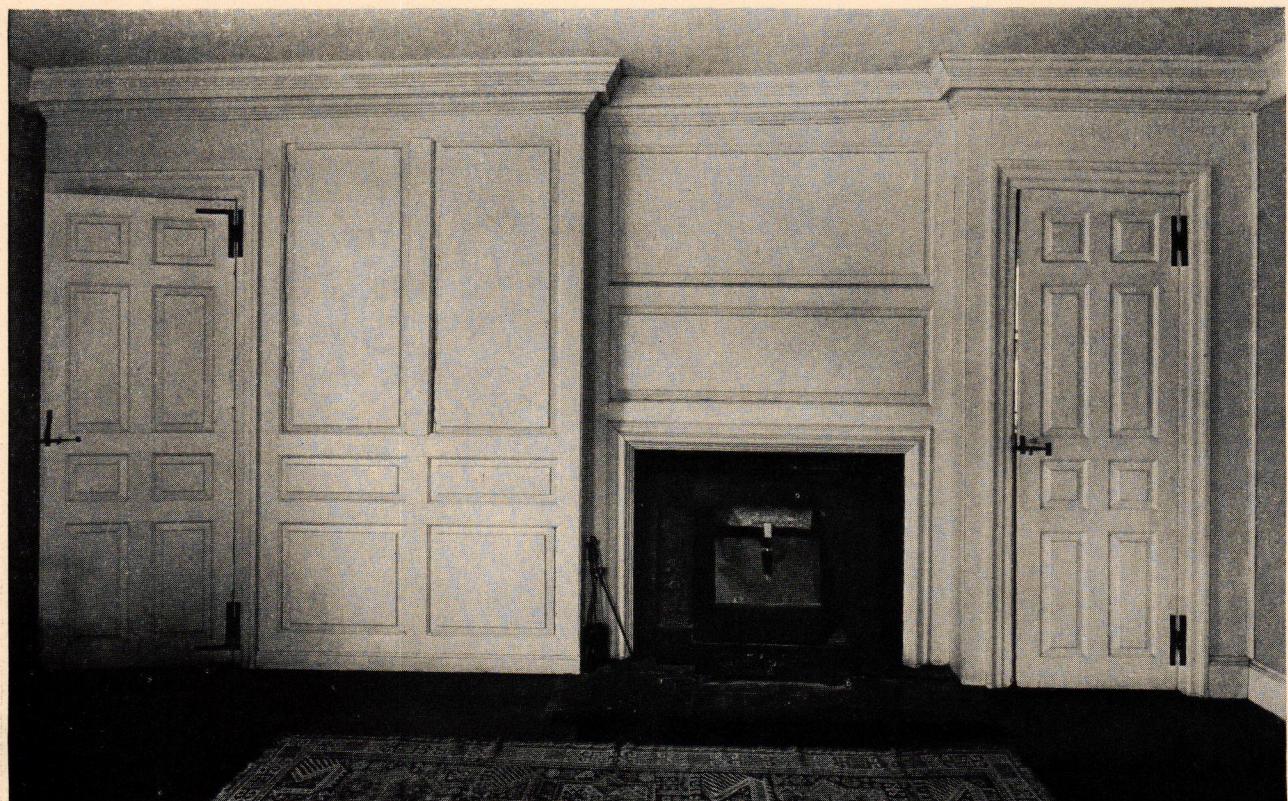
was based rather upon his business acumen in finding a successful economic solution for his pastorate from those conditions amongst which he had found them than upon his eminence as a spiritual leader. For Marblehead—in common with most other smaller townships—was then desperately contending for its prosperity and future livelihood against capitalistic control, in the first instance imposed by its English sponsors, but later furthered both by the governmental and merchandising functions common to the



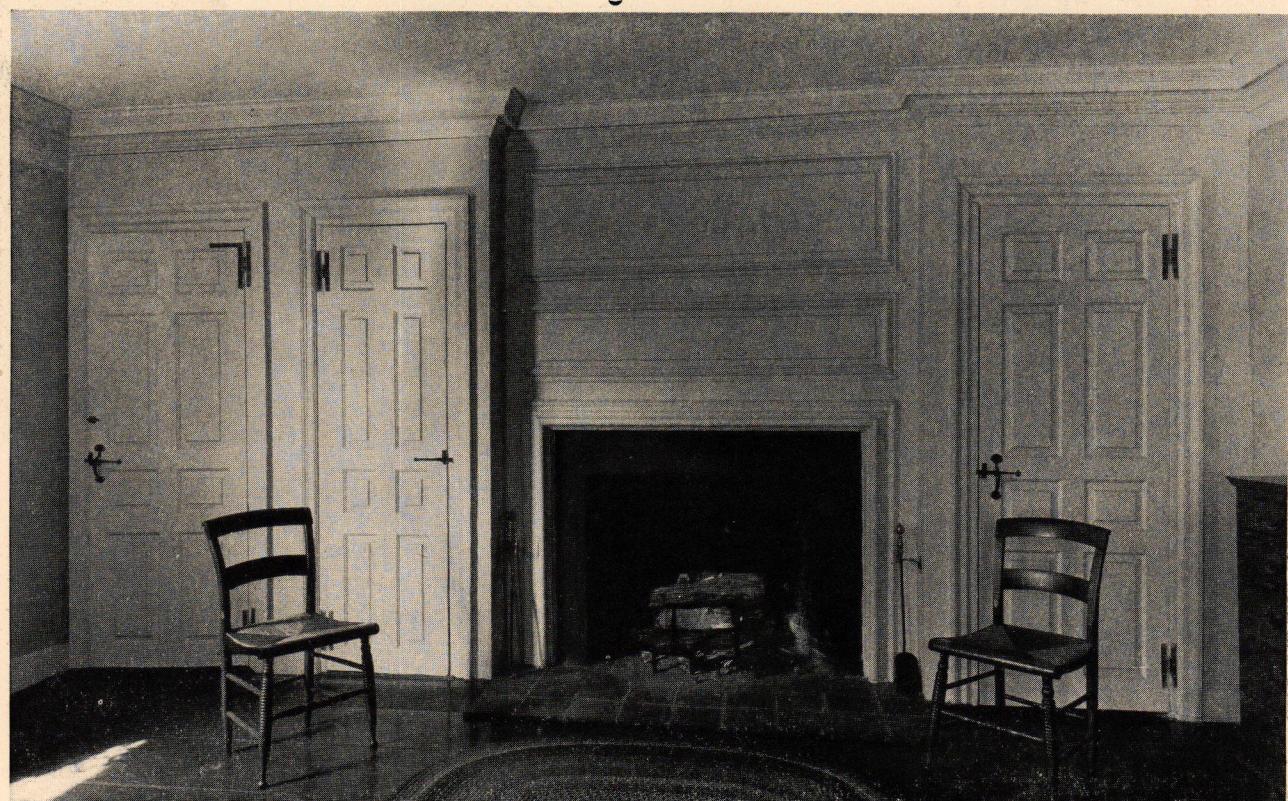
THE AZOR ORNE HOUSE, ORNE STREET, MARBLEHEAD, MASSACHUSETTS

constabulary, to which it gives dignified shelter. If we glance back over the early records of the colonies, it will be realized that there must have been more than a merely spiritual reason for all the early settlement groups to have so continually evolved about their preacher's leadership. He must have possessed temporal as well as spiritual power to have been able to lead his flock successfully into this new world wilderness, and bring them to a permanent fruition. And so it would seem that the high repute attained by Parson John Barnard in this community

period. So long as the residents of this little fishing community were content to remain an adjunct to the larger and more prosperous trading port of nearby Salem; so long as they were content to endure the privations inherent in the fisherman's calling, and allow the merchants of Salem to carry their product to the larger cities where it was most in demand, they must also expect them to obtain the major part of the profits. And the more especially when they were accustomed to accept, locally, other merchandise in exchange for their fish; while these middlemen mer-



ROOM WITH PANELED END



ROOM WITH PANELED END  
THE ORNE HOUSE, ORNE STREET, MARBLEHEAD, MASSACHUSETTS

chants took to themselves not only the ample benefits of coined currency payments for the fish, but also exacted metal money payment for the costs of its carriage to market!

And it was this problem that Parson Barnard solved by persuading the Marbleheaders to convey their own fish to market, and so themselves profit both from the savings made in its transport and the currency payments. It was shortly after this that the town entered upon its new prosperity and period of more preten-

in the classical fashion of the time, that extend over the walls of the two-storied main hall, and the two principal rooms upon the second floor. Obviously, all of the panels originally must have been painted to fit the spaces between doors and window trim, and extending from dado cap to cornice fascia.

The Jeremiah Lee Mansion is, perhaps, almost the best New England example of that type of "Colonial" architecture that might be most correctly termed "Georgian,"—a word much misused! In old England



FIREPLACE AND PANELING SECOND FLOOR  
JEREMIAH LEE MANSION—1768—MARBLEHEAD, MASSACHUSETTS

tious building. And, at once, some of the new three story dwellings—including probably the Robie house, of brick, built about 1729—began to demonstrate this new influx of wealth. And from then on, as in the other houses already illustrated, did the architecture of the town express the change in its manners of living, culminating finally in the Lee Mansion, of 1768.

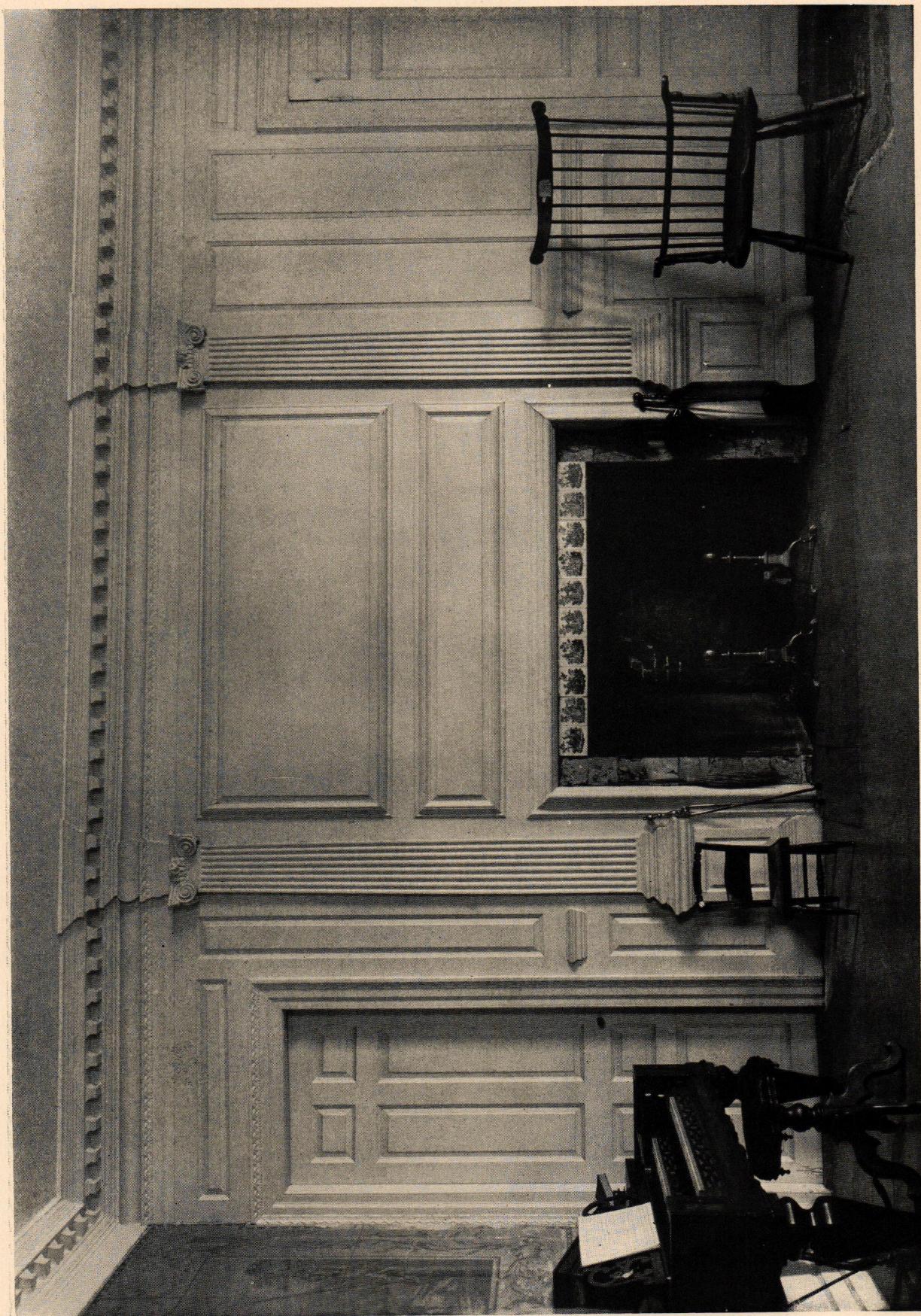
Some further evidence of its dignified detail, furnishing, and decoration appears on these pages, including particularly the fine mantels, and the unusual painted wall coverings executed in gray monotone and white,

it usually refers to a structure of similar design, but generally built of either brick or stone. In America, brick was also used generally for dwellings of this kind in the South, but in the New England colonies—where wood was always the favored material—it was sometimes, as in this present instance, employed so as to suggest, or rather to simulate, the formal stone coursing of England—as in the regions around Bath—for a dwelling of this pretentious kind.

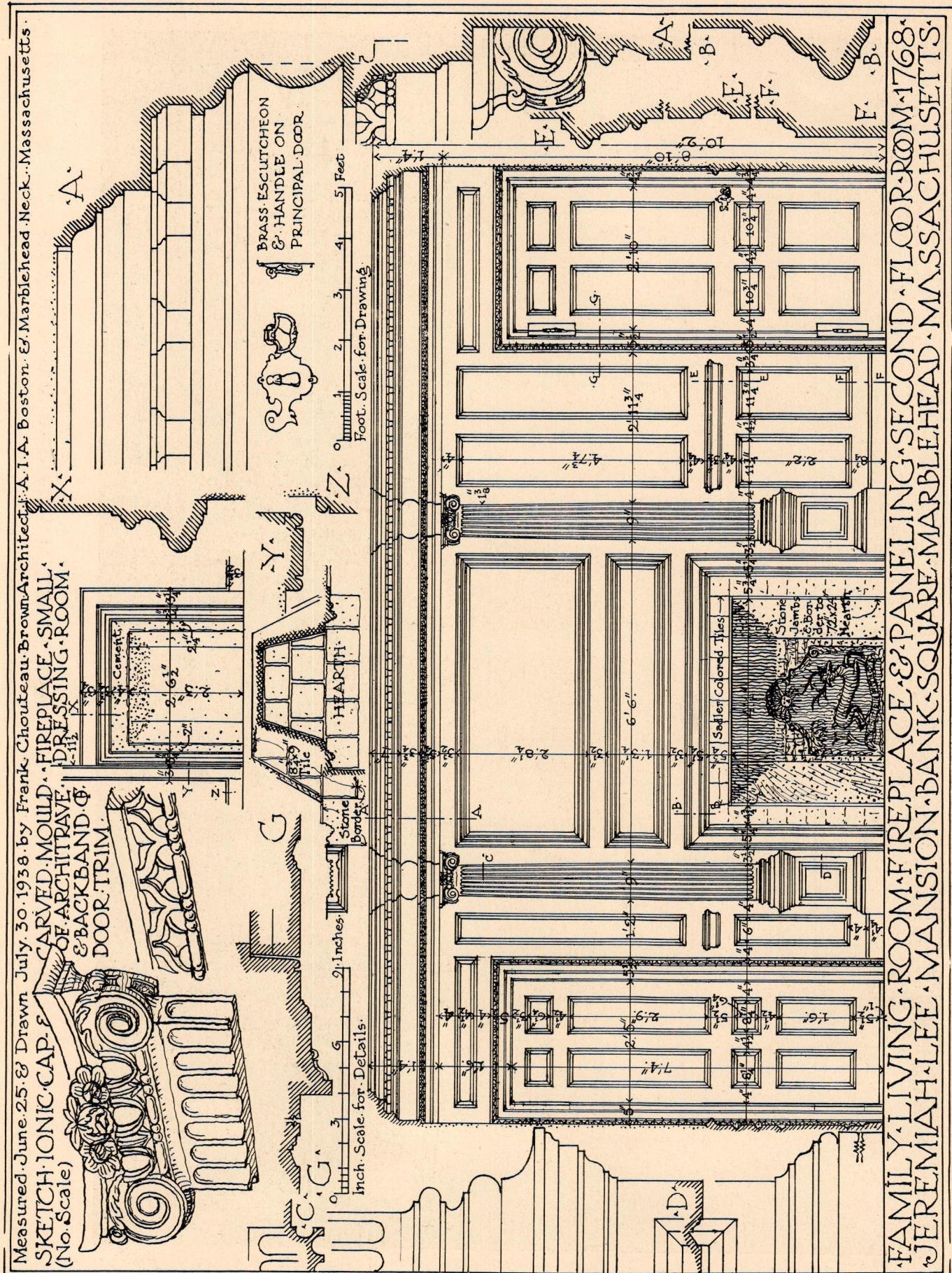
So the use of wooden boards, with both horizontal and perpendicular grooves, disposed to suggest the

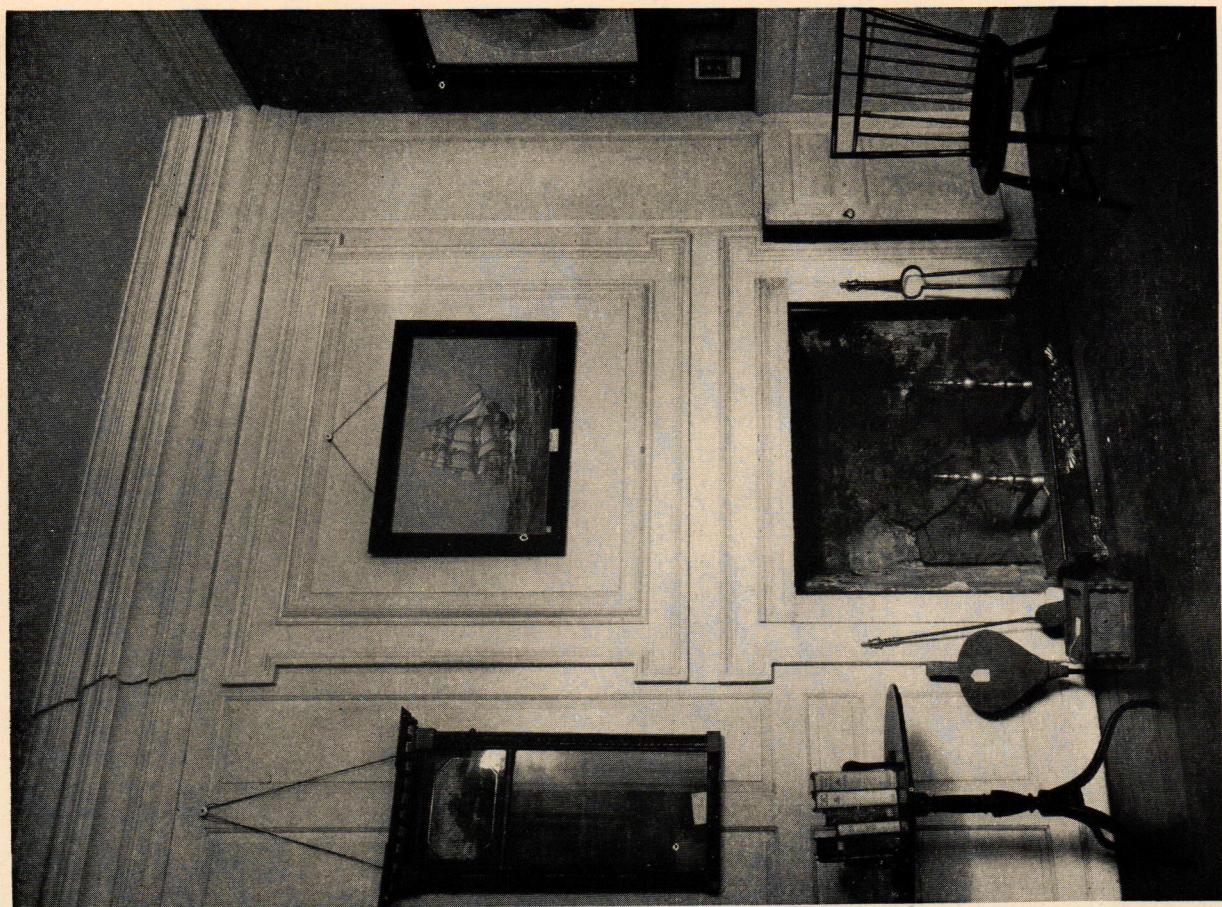


BANQUET ROOM  
JEREMIAH LEE MANSION—1768—BANK SQUARE, MARBLEHEAD, MASSACHUSETTS

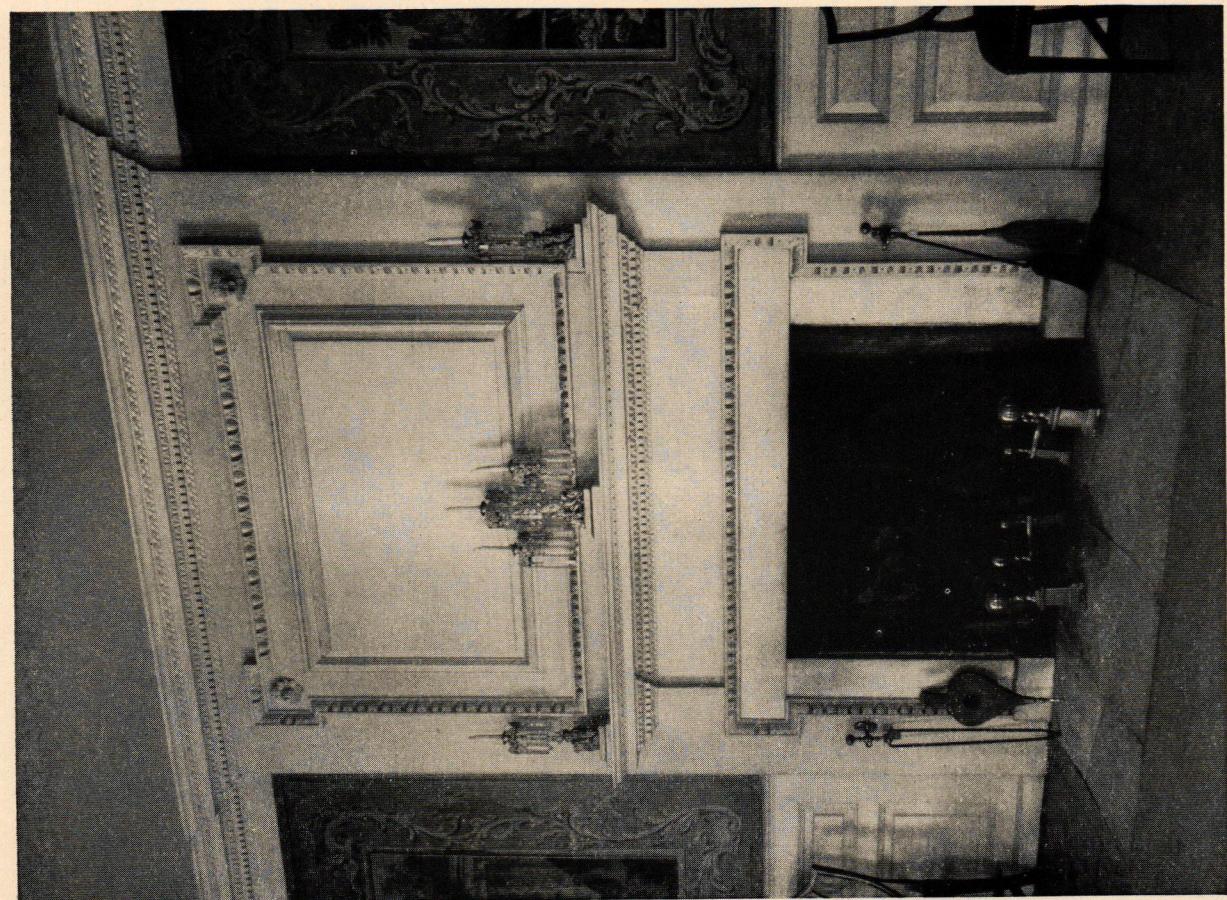


Fireplace and paneling, Second Floor Family Living Room  
JEREMIAH LEE MANSION—1768—BANK SQUARE, MARBLEHEAD, MASSACHUSETTS

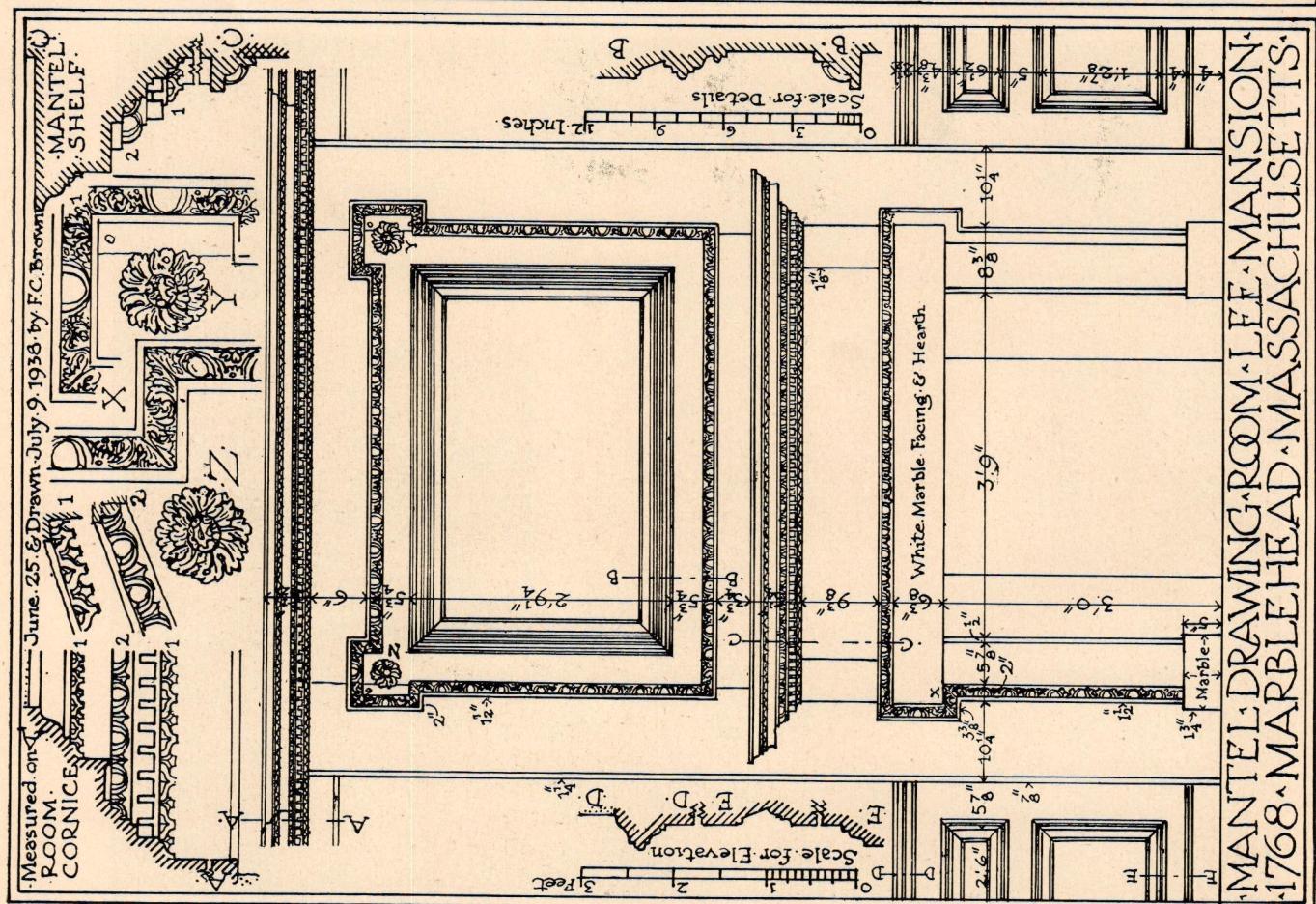
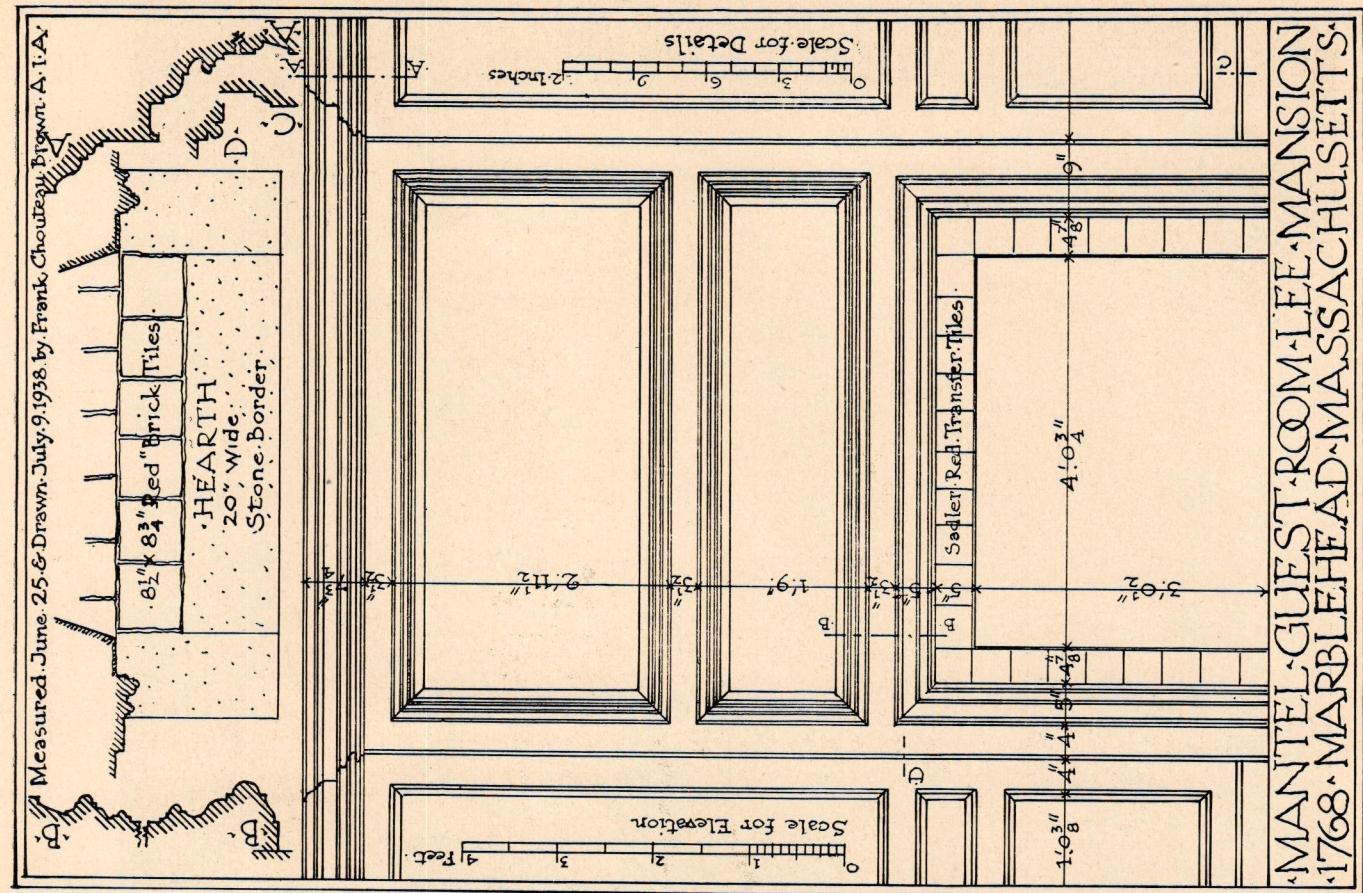


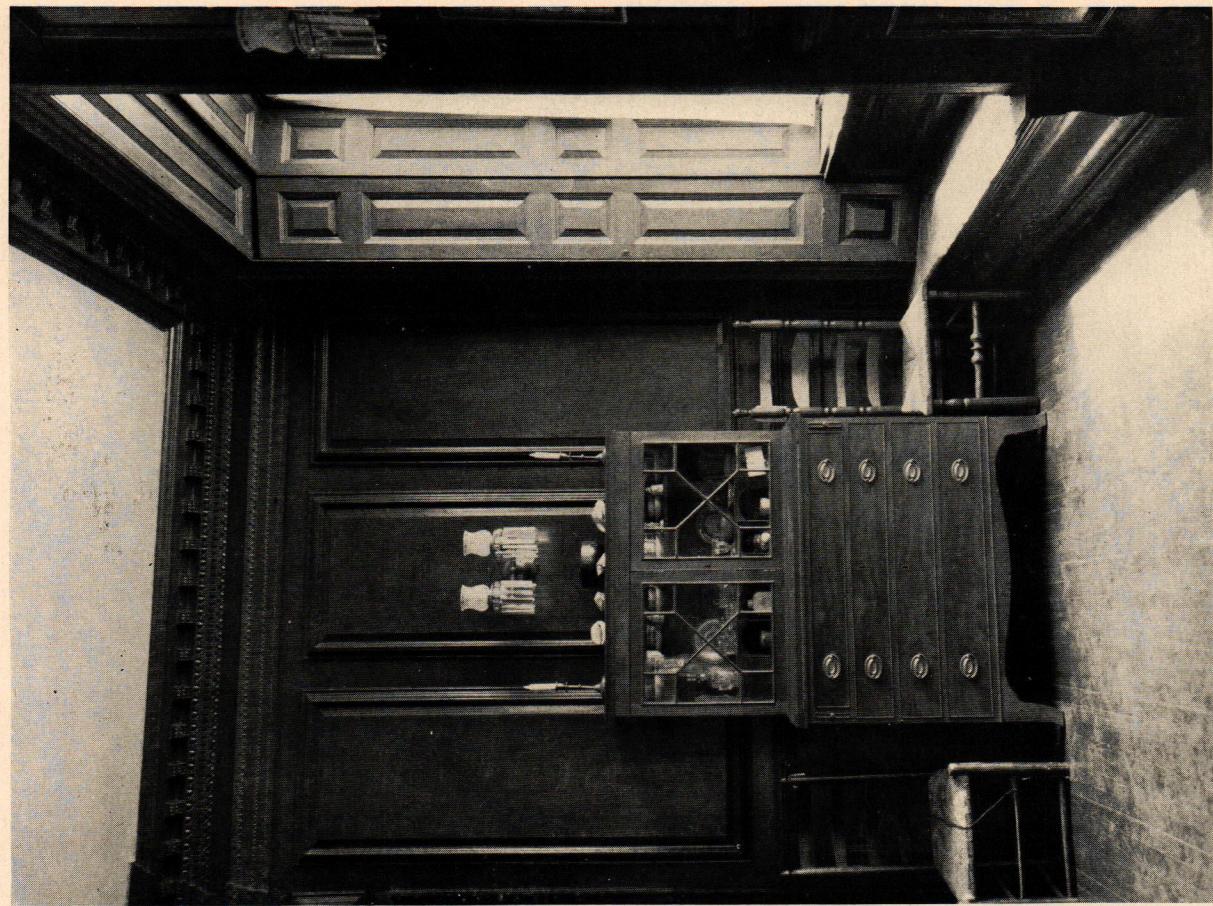


MANTEL—DINING ROOM  
JEREMIAH LEE MANSION—1768—BANK SQUARE, MARBLEHEAD, MASSACHUSETTS

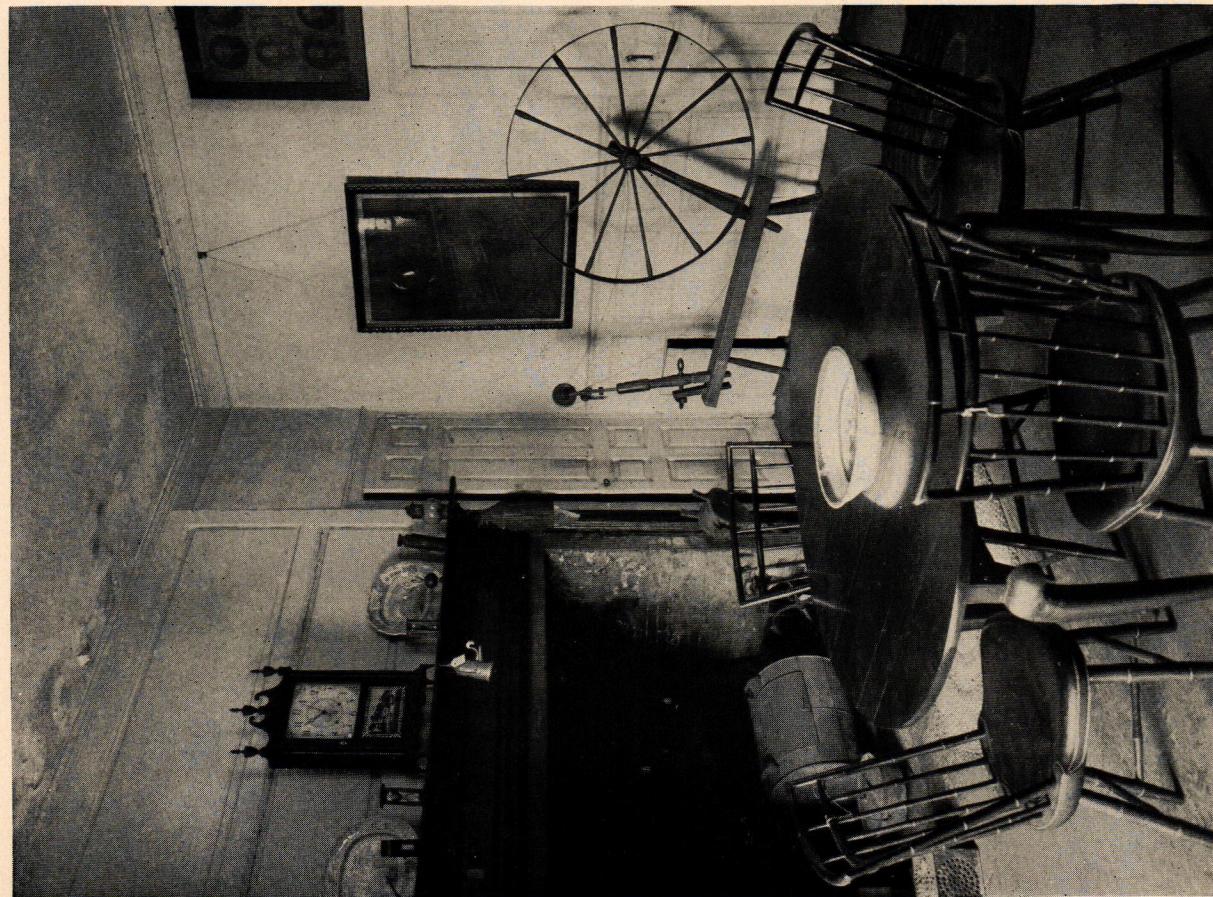


MANTEL—DRAWING ROOM  
JEREMIAH LEE MANSION—1768—BANK SQUARE, MARBLEHEAD, MASSACHUSETTS





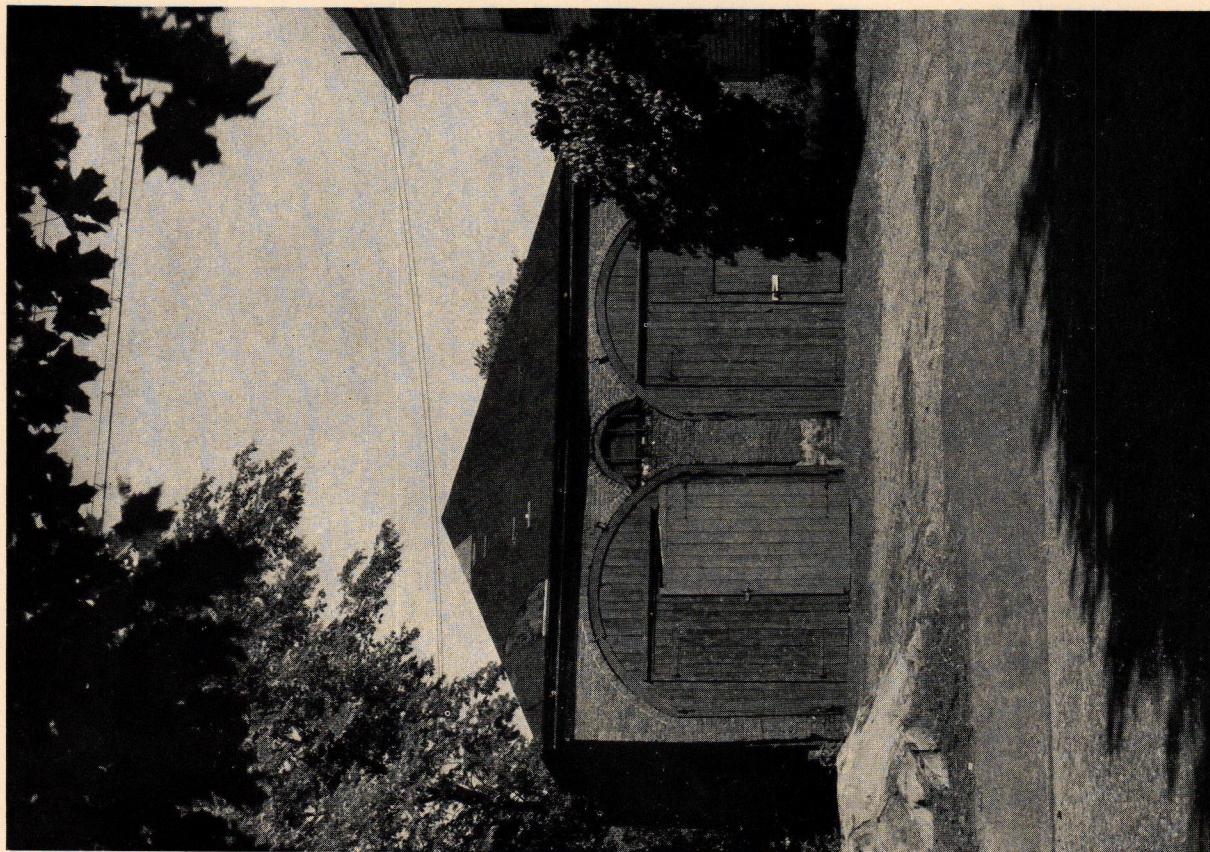
CORNER OF BANQUET ROOM  
THE KITCHEN  
JEREMIAH LEE MANSION—1768—BANK SQUARE, MARBLEHEAD, MASSACHUSETTS

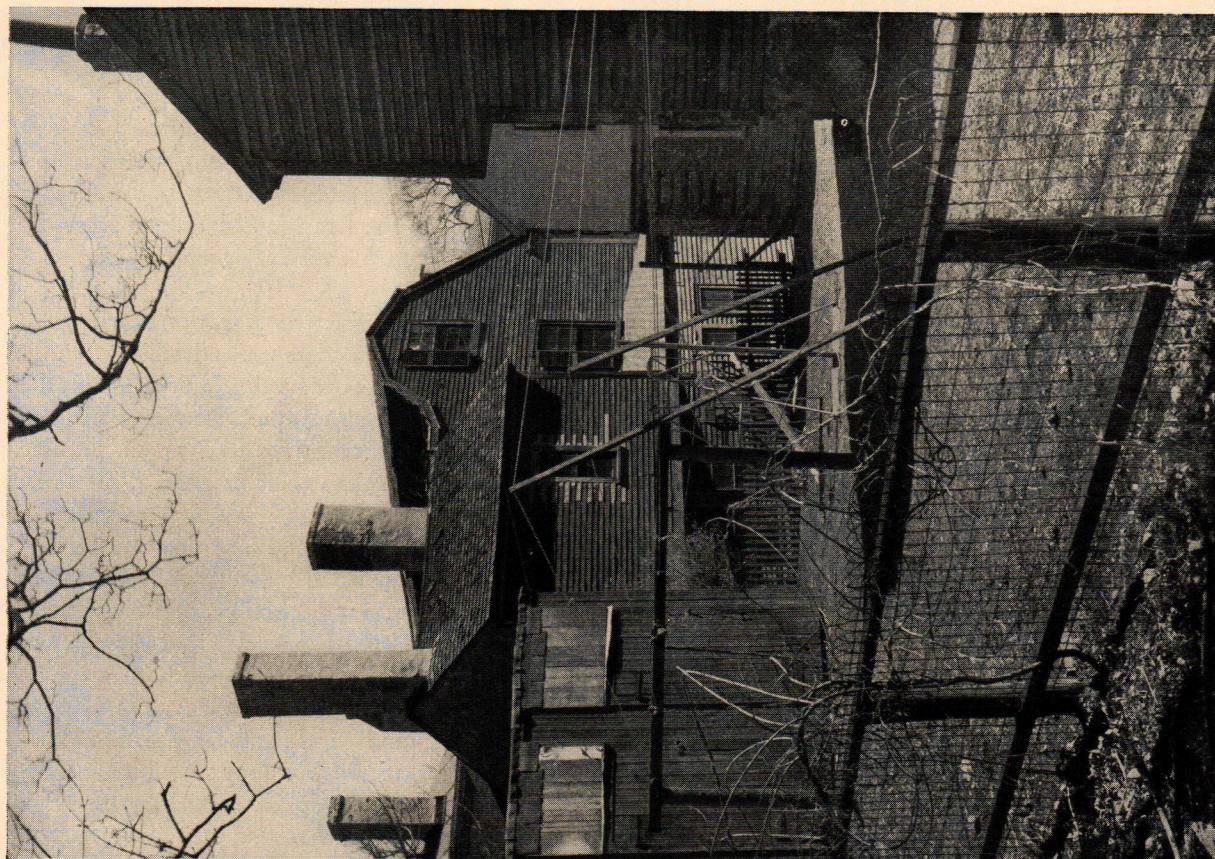


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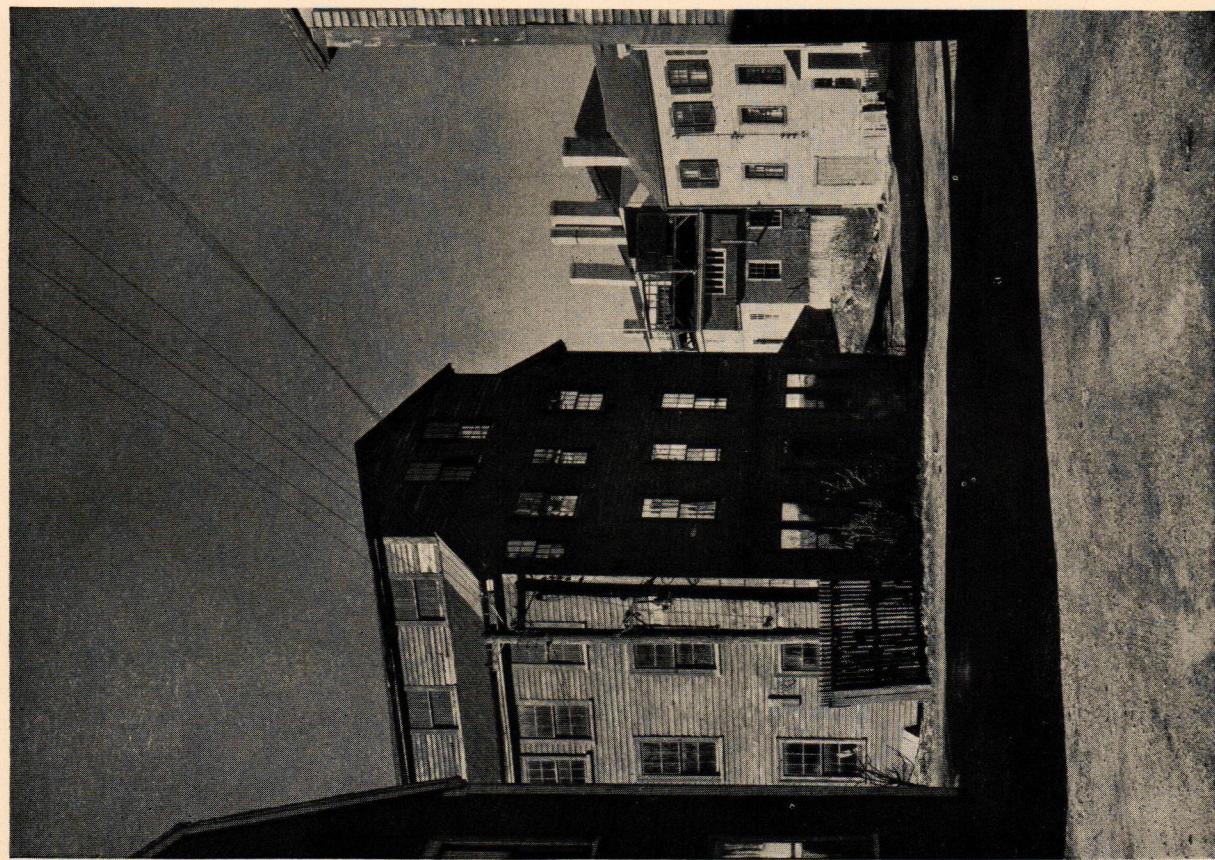


LOWER WASHINGTON STREET, LOOKING NORTH  
"THE GUN HOUSE"  
GLIMPSES OF OLD BUILDINGS WHICH ABOUND IN MARBLEHEAD, MASSACHUSETTS





ACROSS THE BACK YARDS OFF PEARL STREET  
TWO OF THE MANY PICTURESQUE GROUPINGS OF BUILDINGS IN MARBLEHEAD, MASSACHUSETTS



jointing of a masonry wall, was not an uncommon treatment for important dwellings in towns along the coast. In some cases it was employed upon the front alone. In other instances it was used upon the front and two ends; and sometimes—although more rarely—on all four sides of the structure. In Marblehead, both the Lee houses—as well as the “King” Hooper house—have shown this use of wood as an outer wall covering. So, too, did the “Lindens,” formerly in Danvers; and it is also occasionally found on dwellings in Salem, Hingham, Newburyport, Portsmouth, Portland, Providence, and other cities and towns in New England. It is an even more common treatment to find wooden “quoins” used on the corners of old Colonial wooden buildings in place of the simpler upright corner board.

Another feature employed in common by the two Lee Houses, is the “Cupola” on the center of the roof ridge,—that, in the more dignified and formally designed coast dwelling, sometimes supplants the simpler “Captain’s walk,” that was built over the roofs of many old houses along the coast, at the old harbors of the mainland and, especially, in great numbers, in such a sea faring island port as Nantucket. Their chief reason for being was to give the occupants of these houses easy access to the roof to overlook and keep track of the shipping in the harbor and the boats that entered and left its anchorage on their many voyages from the port.

Both Jeremiah Lee and Col. Azor Orne were elected to the Continental Congress, as well as being members of the province “Committee of Safety and Supplies,” and the two, along with their fellow-townsman, Elbridge Gerry (afterwards vice-president of the United States), were very nearly surprised at Cambridge by the British soldiers, on the night of April 18, 1775, when they had remained in the Black Horse Tavern after a later meeting of the province committee, escaping at the very last moment, with only a few clothes,—of the result of which exposure Mr. Lee died just three weeks later.

The Azor Orne house is another Marblehead example of the three story town house—although, rather unusually, with gable ends; and a late doorway—of which, however, the rear view shown here is more locally characteristic; indicating, as it does, the way the houses in that town are sometimes located against the base of the rocky bluffs that often crowd upon and overlook their narrow backyards. This dwelling is situated on the street of the same name, off the turn at the end of Washington Street into Franklin, facing out toward the harbor. The home of Parson Barnard is on Franklin Street, just around the corner; a large

gambrel roof dwelling, enshrouded in fine old trees, of nice proportions, but with little authentic detail remaining from its many changes and repairs.

Inside its later Greek doorway, the Orne house has a fine stairway of the period of about 1770, with fireplaces and cornices quite similar to those of the simpler types to be found in the Lee Mansion; along with the rooms with simple paneled end, of which two examples are shown herewith.

But, after all, the distinctive charm of Marblehead does not reside in its more pretentious dwellings, handsome and much visited as they are; but rather in the more informal and picturesque groupings of old weatherworn sided structures, placed at all possible angles to the street, and to their neighbors, in which certain sections of the old town still abound. While, to a lesser extent, at Newcastle and upon some portions of the “old River Road” along the Merrimac in Amesbury, and at one or two sections of Portsmouth, and a few bits around the harbor at Gloucester, a few similar glimpses may now be seen—and, to an even greater extent, they will probably continue and be preserved on the island at Nantucket—certainly nowhere else so near to Boston may so much of the charm of an old informally developed fishing port still be seen by the hurried visitor.

Repairs and rebuildings by natives and summer visitors; repainting, clapboarding, and new wall-shinglings by the stiff-necked “Headers”; with clumsy carpentered replacements, entirely lacking the old character that has made this town so attractive to visitors in the past, still goes doggedly on, year after year,—until now there remain only a few of the many picturesque groupings that formerly abounded on every side. Such glimpses as of the North Church tower from Back St. (page 141, Vol. XXIV, No. 3); the bit on Lower Washington St. (page 158); or the view nearly behind that place, across the back yards off Pearl St. (page 159); the bit to be seen on the S-shaped zig-zag down the hill from Lee St. onto Front (page 159)—although now much less interesting than before the old fish-warehouse was “slicked up” a few years ago!—or, finally, and most characteristically, the old lobsterman’s shack surrounded by lobster pots and dories, down near the “Little Harbor” beach, are fast disappearing, along with other well-remembered vistas—such as the old “Spite House” before it was painted a few years ago. They now linger in the memories of a few older inhabitants, a fewer number of old visitors,—and where they have been recorded for posterity, as vanishing records from the nation’s picturesque and “functional” past, as upon these pages—and others in this series—will continue to show!

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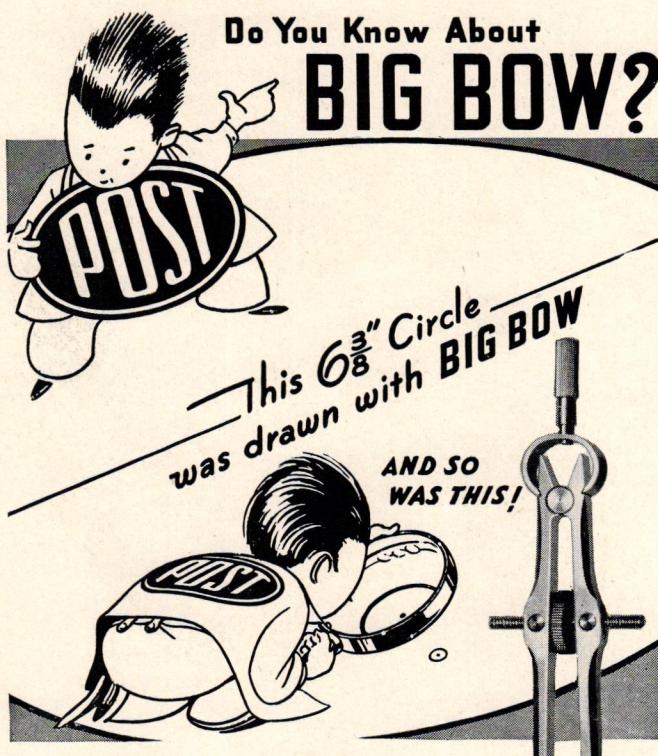
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# PUBLICATIONS ON MATERIALS AND EQUIPMENT

of Interest to Architects, Draftsmen and Specification Writers

Publications mentioned here will be sent free unless otherwise noted, upon request, to readers of PENCIL POINTS by the firm issuing them. When writing for these items please mention PENCIL POINTS.

**MESKER'S GUILDHALL CASEMENTS.**—A.I.A. File No. 16-e-1. New architects' manual covering a line of residence casements. Useful collection of drafting room data including specifications, construction details, full size sections, standard sizes, hardware applications and erection fittings, installation details in various types of wall constructions, hardware details, etc. 32 pp. 8 1/2 x 11. Mesker Brothers, 424 South 7th St., St. Louis, Mo.

Published by the same firm, "Mesker's Pivoted and Projected Sash." A.I.A. File No. 16-e-1. Useful collection of data on the Mesker line of pivoted and projected sash. Included are specifications, construction and installation details, full size sections, hardware applications, standard sizes, glazing details, etc. 36 pp. 8 1/2 x 11.

**WINDOW CONDITIONING—DOUBLE-GLASS INSULATION.**—New brochure, dealing with the subject L. O. F. flat drawn window glass, discusses the advantages of window conditioning of homes by means of double-glass insulation. Included are group of charts showing fuel savings. 16 pp. 8 1/2 x 11. Libbey-Owens-Ford Glass Co., Toledo, Ohio.

**HAMILTON DRAFTING FURNITURE.**—New catalog giving the latest information on drawing tables, filing equipment and drafting room accessories. It contains helpful suggestions on filing tracings and drawings, shows 26 different styles of drawing tables and has a full description of the complete Hamilton line of drafting furniture. 64 pp. Hamilton Mfg. Co., Two Rivers, Wis.

**MILCOR STEEL STUD.**—Booklet covering a new one-piece metal wall stud for hollow partitions. Included are installation photographs, erection details, method of attaching stud to floor and ceiling runners, specifications and complete data on sizes, weights and structural properties. 8 pp. 8 1/2 x 11. Milcor Steel Co., Milwaukee, Wis.

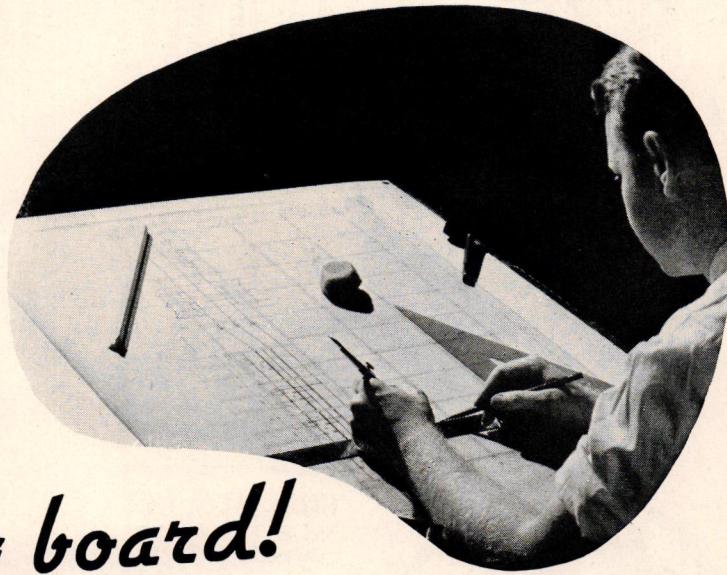
**TRUSCON FLOR-DYE SYSTEM.**—Folder presenting descriptive and application data covering a new coloring and dust-proofing treatment for interior and exterior cement floors. 4 pp. 8 1/2 x 11. The Truscon Laboratories, Detroit, Mich.

**LOW-COST AMERICAN RADIATOR HEATING SYSTEMS DESIGNED FOR THE NATIONAL SMALL HOMES DEMONSTRATION.**—Bulletin on the National Small Homes Demonstration containing plans of the eight houses in the series and detailed specifications for American Radiator steam and warm water heating systems for each. 12 pp. 8 1/2 x 11. American Radiator Co., 40 West 40th St., New York, N. Y.

(Continued on page 32, Advertising Section)

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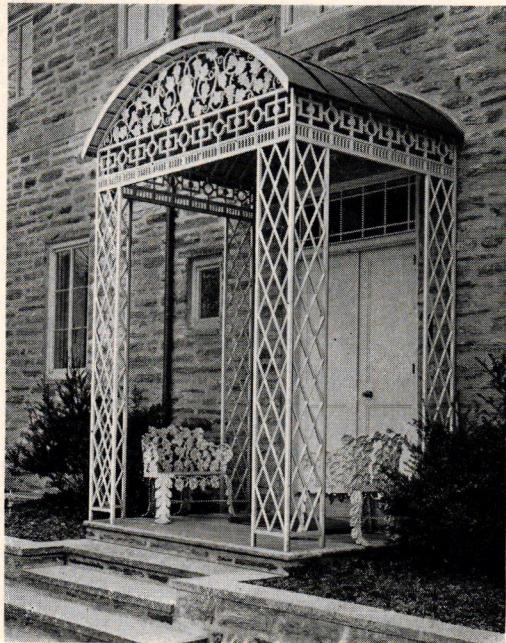
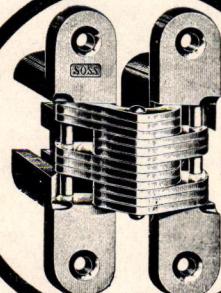
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## PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 30, Advertising Section)

**MARLITE FOR CREATING BEAUTIFUL HOME INTERIORS.**—Attractive brochure printed in full colors dealing with the subject of Marlite, a wall and ceiling covering suitable for a wide range of applications. Series of illustrations show a variety of decorative treatment by the combination of panels in different colors. 16 pp. 10 3/4 x 8 1/2. Marsh Wall Products Inc., Dover, Ohio.

**MILLS METAL PANEL TYPE TOILET COMPARTMENTS.**—A.I.A. File No. 28-a-3. Data bulletin covering the Challenger, a new design for a panel type toilet compartment, which can also be used for showers, dressing rooms, and hospital cubicles. Specifications, details. 8 pp. 8 1/2 x 11. The Mills Co., 965 Wayside Road, Cleveland, Ohio.

**O T JOISTS BY TRUSCON.**—A.I.A. File No. 13-g. Catalog No. E.-120, superseding No. E.-90. Useful reference manual covering a line of open truss steel joists for modern fireproof building construction, also a line of open truss nailer joists for light occupancy buildings. Included are specifications, dimensions and properties, typical calculations, safe load tables and construction details, together with Steel Joist Institute standard specifications for steel joists. 40 pp. 8 1/2 x 11. Truscon Steel Co., Youngstown, Ohio.

**MODERN HOME BUILDING.**—Attractive brochure describing and illustrating the complete line of Carey home building products for roofs, floors, side walls, partitions, foundations, heating systems, sidewalks and drives, also bathroom cabinets and accessories. 28 pp. 8 1/2 x 11. The Philip Carey Co., Lockland, Cincinnati, Ohio.

**COLONIAL FIREPLACES AND FURNISHINGS.**—Catalog describing and illustrating the Colonial line of fireplaces, fireplace construction necessities, grilles, grates, screens and other fireplace furnishings. 16 pp. 8 1/2 x 11. Colonial Fireplace Co., 4603 Roosevelt Road, Chicago, Ill.

**CHARAVAY AIR-MOVING EQUIPMENT.**—A.I.A. File No. 30-d-1. Catalog covering a complete line of propeller-type fans. Descriptive data, dimensions and capacity tables. 26 pp. Hartzell Propeller Fan Co., Division of Hartzell Industries, Inc., Piqua, O.

**ARCHITECTS AND ENGINEERS DATA BOOK, 1938-1939.**—A.I.A. File No. 31. Valuable new publication describing all types of electrical equipment for use in buildings. It lists briefly the field of application, features and specifications for each product. Included are hundreds of items such as all types of motors, control, protective devices, panel boards, switchgear, generators, transformers, air conditioning, lighting, elevators, wiring devices, stokers, and turbines. Suggested standard of adequate residence wiring, wiring diagram symbols, lighting layout information, tables for selecting equipment, and curves for estimating prices are prepared in a manner which will be useful to architects and engineers. Also included is information on where to buy equipment or obtain additional information for each product. 94 pp. 8 1/2 x 11. A limited number of copies of this publication, B-2161, are available from the nearest district office or from headquarters of Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa.

(Continued on page 34, Advertising Section)

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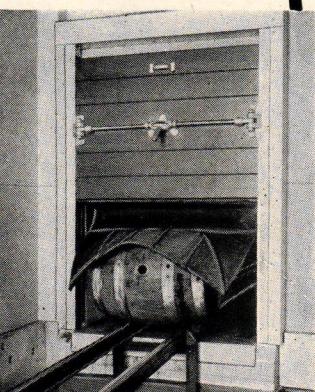
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## PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 32, Advertising Section)

### THE JOSAM MODERATOR MIXING VALVE.

Bulletin illustrating and describing in detail a new moderator mixing valve which is designed to prevent accidental scalding in showers and available for all types of installation. 6 pp. 8 1/2 x 11. Josam Mfg. Co., Empire Bldg., Cleveland, O.

**LESS WATER YET MORE PEACEABILITY.**—Catalog giving detailed description of the advantages of Pozzolith, a pozzolanic, water reducing plasticizer, for use in concrete mixes, which for the first time is being announced in dry form. Included are specifications, test data and photographs of structures in which this material was used. 20 pp. 8 1/2 x 11.

Published by the same firm, "Master Builders Master Mix." A.I.A. File No. 3-b-2. Description and specification data sheet covering an integral plasticizer, hardener and waterproofer for concrete floors, now being produced in dry form.

**BOSTWICK STEEL LATH.**—Useful reference guide covering the complete line of Bostwick products, including metal lath, accessories, steel studs and partition systems. Specifications, installation methods and details, descriptive data, etc. 16 pp. 8 1/2 x 11. The Bostwick Steel Lath Co., Niles, O.

Published by the same firm, "Bostwick Steel Stud Partition System." Catalog with specifications, installation details and descriptive data covering a steel stud for use with Truss-loop lath in forming Bostwick partitions. 8 pp. 8 1/2 x 11.

**QUALITY PLUMBING AND HEATING EQUIPMENT FOR THE LOW-COST HOME.**—Attractively illustrated brochure covering the Crane line of bathroom fixtures, kitchen sinks and complete heating system for moderately priced homes. Specifications. 20 pp. 8 1/2 x 11. Crane Co., 836 So. Michigan Ave., Chicago, Ill.

### RECOMMENDATIONS FOR OFFICE LIGHTING.

—Bulletin presenting useful data for the architect and lighting engineer on the subject of office lighting with special reference to the Commodore line of luminaires. 16 pp. 8 1/2 x 11. The F. W. Wakefield Brass Co., Vermilion, Ohio.

**KOPPERS YEARBOOK—1938.**—The story of Koppers Company, the industrial organization which in 24 years has grown to become a producer of products for nearly every type of industry in the nation, is told for the first time in a new book which has just been published. Primarily a processor of coal, the book states, the company performs all of the numerous operations necessary to obtain coke, coke oven gas, tar, light oils, and chemicals which it and other industries convert into an almost countless array of products. As a manufacturer, Koppers produces preserved wood, highway paving, roofing and waterproofing materials and complete plants and equipment necessary to prepare coal for use as such, or, through coking and distillation, to obtain its products. It builds other general industrial machinery and equipment. The book also describes Koppers Company in the light of a taxpayer and employer, with figures which reduce its balance sheet and profit and loss statement to the terms of a one-man enterprise. 34 pp. 8 1/2 x 11. Koppers Co., Pittsburgh, Pa.

(Continued on page 37, Advertising Section)

## PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 34, Advertising Section)

TRANE GAS HEATERS.—Bulletin No. 320 describes the advantages of a new gas heater, which is a complete heating system in one compact cabinet, for industrial, commercial and residential applications. 6 pp. 8 1/2 x 11. The Trane Co., La Crosse, Wis.

Published by the same firm, "Trane Gas Air Conditioners." Bulletin No. S-320-1 covers a new line of gas-fired year-around air conditioners for use in residences, shops, stores or offices. 6 pp. 8 1/2 x 11.

HANDBOOK OF CLAY TILE.—Valuable reference book for architects and designers covering a line of Mosaic products including all types of floor and wall tiles, decorative faience and bathroom accessories, also Carlyle quarry tiles. Included are specifications, color charts, installation photographs and color plates showing numerous floor designs, strips, panel and inserts. 28 pp. 8 1/2 x 11. The Mosaic Tile Co., Zanesville, Ohio.

IT'S DIFFERENT.—New brochure presenting detailed discussion of the advantages of Eagle insulation in walls and roofs of homes. 24 pp. 8 1/2 x 11. The Eagle-Picher Lead Co., Main and Court Streets, Cincinnati, Ohio.

### MANUFACTURERS' DATA WANTED

TOM HARDING, JR., *Architect*, Donaghey Building, Little Rock, Arkansas. (Data for A.I.A. file.)

KEPPEL O. SMALL, *Architect*, 717 Chestnut Street, Greenville, Ohio. (Data for A.I.A. file.)

ROY A. SHEDDY, *Architect*, Housing Authority of Gallatin County, Shawneetown, Ill. (Catalogs and technical information on sound equipment, etc., to be used in equipping a theatre seating 500 persons.)

GRAY & BENNETT, *Architects and Engineers*, 2017 West Gray, Houston, Texas.

DESIGN SECTION, U. S. Engineer Office, First New Orleans District, 604 Union Building, New Orleans, La. (Data for A.I.A. file.)

ARCHIE PROTOPAPAS, In Charge of Research, New York City Housing Authority, 10 East 40th Street, New York, N. Y.

PAUL ERNEST HOFFMAN, *Architect*, 5045 N. Mango Avenue, Chicago, Ill. (Data for A.I.A. file.)

DAVID W. POTTER, *Architect*, 68 Valencia Street, St. Augustine, Florida.

MICHAEL TALAY, *Draftsman*, 125 Guernsey Street, Brooklyn, N. Y. (Data on schools and stores.)

CHARLES E. WEEKS, JR., *Draftsman*, 2510 Berthoud Street, Pittsburgh, Pa. (Data for A.I.A. file on institutional, commercial and residential buildings, and hospitals.)

HAROLD W. TREBER, *Designer*, 74 Guernsey Street, Brooklyn, N. Y. (Data on homes, residential work, for future development on homes.)

LESLIE S. O'GWYNN, *Student*, 259 South Ann Street, Mobile, Ala. (Data on homes and small buildings.)

HARRY H. SMITH, *Student*, 351 South Detroit, Los Angeles, Calif. (Data on products, materials, inventions and ideas.)

JAMES M. HOFFMAN, *Student*, 726 City Park Avenue, New Orleans, La.

WILLIAM L. KAUFMAN, *Student*, 1023 Payne Street, Louisville, Ky. (Data for A.I.A. file.)



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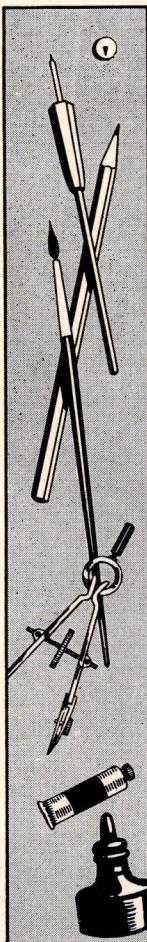
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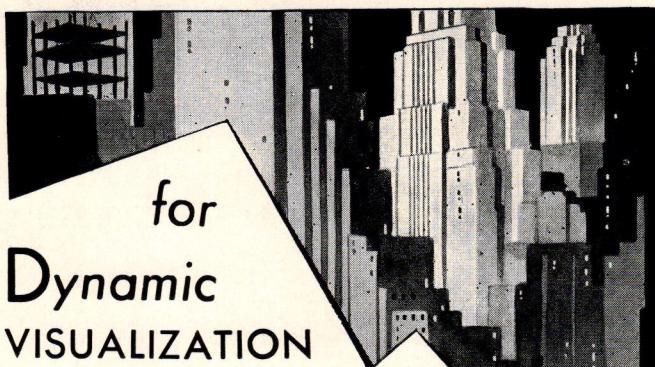
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### POSITIONS OPEN

(See additional Positions Open notices on page 28 Advertising Section)

A REALTY corporation with an architectural department in Virginia has openings for two draftsmen who have had some experience in site planning of large scale housing developments. Would prefer younger men who are not married and whose salaries would be around \$50.00 a week. Box No. 900.

OFFICE in Middle-west wants good all around senior draftsman. Must make snappy drawings and do neat lettering. Some reinforced concrete and structural engineering desirable. Box No. 901.

AGENT Wanted: Mural painter with established reputation gained through prominent work executed in last few years, wishes to secure the services of an agent who has connections with architects or others who may require mural work. Attractive proposition offered to right party. Box No. 902.

ARCHITECTURAL designer. Give qualifications and salary. Further opportunity to become a partner if desired is not a requirement for employment. If interested state amount of capital or interest you wish. Box No. 913.

ARCHITECTURAL DRAFTSMAN who has had about three to five years' experience on working drawings. Box 917.

TWO SENIOR architectural draftsmen, experienced in school work. \$50 per week. Take samples of work. Hacker and Hacker, Fort Lee Trust Co. Bldg., Main Street, Fort Lee, N. J.

ARCHITECTURAL DRAFTSMAN wanted who can carry a court house job through from the preliminary sketches to the completed drawings. Charles Altfilisch, Decorah, Iowa.

### POSITIONS WANTED

ARCHITECTURAL draftsman specializing in perspective and rendering in color and black and white. Both interiors and exteriors. 20 years' experience. Box No. 903.

ARCHITECT: B.S. European graduate, 4 years' experience. Age 28, single. Will accept employment anywhere. Salary secondary. Sigmund Frydman, 2053 E. 68th Street, Chicago, Ill.

JUNIOR architectural draftsman, graduate Brooklyn Tech. Age 23, 3 years' practical experience, Metropolitan vicinity. Any offer acceptable. Box No. 904.

ARCHITECTURAL draftsman, 25 years' experience, New York or Jersey location. All types of buildings. Box No. 905.

GRADUATE architect, knowledge of Spanish, 18 years' finest all around experience on the board, designing and supervision of construction. Capable of assuming responsibility. Box No. 906.

CREATIVE designer, registered architect, would like to form association with good firm where could take charge of all inside work leaving business end to other member. Have specialized in fine residence work, rendering, landscaping, interior decorating of same. Go anywhere. Box No. 907.

OPPORTUNITY wanted with architect or landscape architect. Landscape architecture at Harvard. Experience in private office and residential work, including design and supervision. F. B. Lillie, West Street, Dedham, Mass., care Gallup.

PRACTICAL architectural draftsman and designer. Good all around work, 15 years' experience, designs, perspectives, studies and working drawings, sketches. Seeks opportunity with some company manufacturing building products or fixtures. Box No. 908.

YOUNG man, 20, 2 years' experience in Beaux Arts School. Architectural drafting, help in surveying, willing worker. Junior draftsman. Box No. 909.

REGISTERED professional engineer, comprehensive experience, now employed, seeks position leading to investment and partnership in architectural-engineering firm with established practice. Box No. 910.

SECRETARY-stenographer, six years' architectural experience, intelligent, accurate, enthusiastic. Box No. 911.

PRODUCING architectural draftsman, 15 years' board and seven years' superintendence experience, specializes on working drawings on commercial, institutional, residential buildings and hospitals. Chas. E. Weeks, Jr., 2510 Berthond Street, Pittsburgh, Pa.

AGENCY wanted with corporation having large diversified line of building products, west central Wisconsin location. Twenty years' architectural construction and selling experience. Box No. 912.

COLLEGE and architectural school graduate, 12 years' experience, college and university buildings, residences; designing, drafting, superintendence; brief independent practice. Married. Desires connection with firm having general practice with future. Willing to go to any section of country. Box No. 914.

RENDERING—Broad experience in all types and media of delineation. Box No. 915.

YOUNG man, 18, desires practical experience in architects' office. Lane Tech graduate, architectural course. Inexperienced but eager to work. Albert Schoner, 2845 N. Campbell Ave., Chicago, Ill.

LANDSCAPE designer — progressive, capable, would like connection with progressive architectural or landscape architectural firm, pre-fabricated house company, park department, planning commission. Garrett Eckbo, 61 Garfield Street, Cambridge, Mass.

SUPERINTENDENT or general foreman, 31 years' experience all types construction, steel and general. Frank Blair, 3220 Northwestern Ave., Detroit, Mich.

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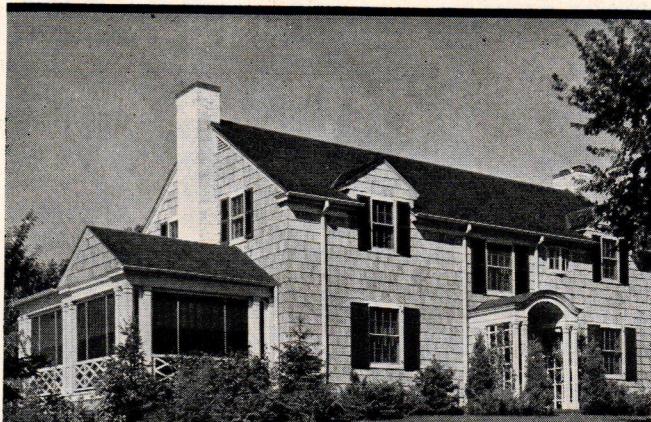
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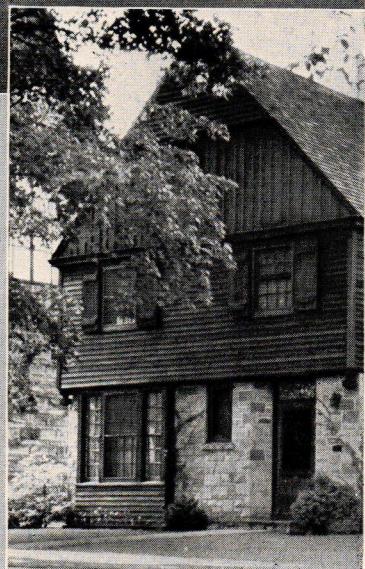


Above: House at Minneapolis.

H. H. Livingston, architect.  
Walls and roof stained with  
Cabot's Stain in contrasting  
shades. Blinds: Cabot's Gloss  
Collopak. Chimney and trim:  
Cabot's DOUBLE-WHITE.

• • •

At right: House designed by  
Taylor and Maas, architects,  
Stevens Point, Wisconsin. Sid-  
ing, shutters and roof stained  
with Cabot's Creosote Stains.



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(Continued from Page 14)

columnar architecture was ignored, brought forth vigorous protests from the public and real estate interests.

It took a great deal of courage to withstand this barrage of criticism and it is to the credit of the Associated Architects that their campaign was successful. We may also note that no objection was made by the same self-appointed critics to a Colonial brick church recently completed in the same neighborhood and entirely out of harmony with the Capitol.

Some forty miles north of Denver lies that charming university town of Boulder, where we found a controversy raging over the bold concrete sculptures that became popularly known as "Min and Jake." They were executed over the entrance to the new high school by Marvin Martin, a vigorous young sculptor with an uncompromising belief in the new forms. The architect of the school, Earl Morris, and the Federal authorities who approved the models, soon found themselves in the center of a storm of disapproval. As a result, a seething art debate by the high school students was culminated by the willful spilling of a green paint over the innocent, if not handsome, "Min and Jake." The educational influence of this debate, however, manifested itself in a modern art exhibition at the University.

There is no battle of ideas south of Colorado. In New Mexico the adobe houses reign supreme. They belong there and the white man is not likely to introduce new building ideas or methods in this section of the country where Indians know the local clay and how to use it; where native women can build a round fireplace and flue for six dollars each.

Civic pride and growth of population cause much competition and jealousy among most of the larger cities west of Cleveland. The entire Mid-west and West are in a constant state of "outdoing the other fellow." The usual catcall is "Overgrown Village" and Los Angeles seems to be the focal point of the attack. There the small house is the hub around which Architecture revolves.

Little wonder then that California Architects have developed small house designs to the point of National recognition, as evidenced by the great number of competition prize-winners coming from there.

In the office of Walker and Eisen, Bob Field showed us new movie studio designs. These designs compare to the existing studios like Jones Beach to Coney Island.

RED

## Frank Lloyd Wright Exhibition Planned

The College of William and Mary in Williamsburg, Virginia, will open to the public on October 14 the first comprehensive exhibition in the United States of photographs of the architectural work of Frank Lloyd Wright. The show, which marks another step in the recognition of Frank Lloyd Wright in his own country, will include photographs from the collection of the Department of Fine Arts of the College, the Museum of Modern Art and models of buildings for Wright's Broadacre City project.

In conjunction with the exhibition, an important event in the South, Frank Lloyd Wright will speak at the College on October 24.

## Competition Held For New University

The Government of El Salvador, planning to erect new university buildings at a cost of \$1,000,000, has announced an architectural competition with a first prize of \$1500 and a second prize of \$500. The designs must be received at the Secretariat of the University of El Salvador not later than noon of October 31, 1938. The winning designs will become the property of the university.

Further details about terms and rules of the competition may be obtained by writing to L. S. Rowe, Director General, Pan American Union, Washington, D. C.

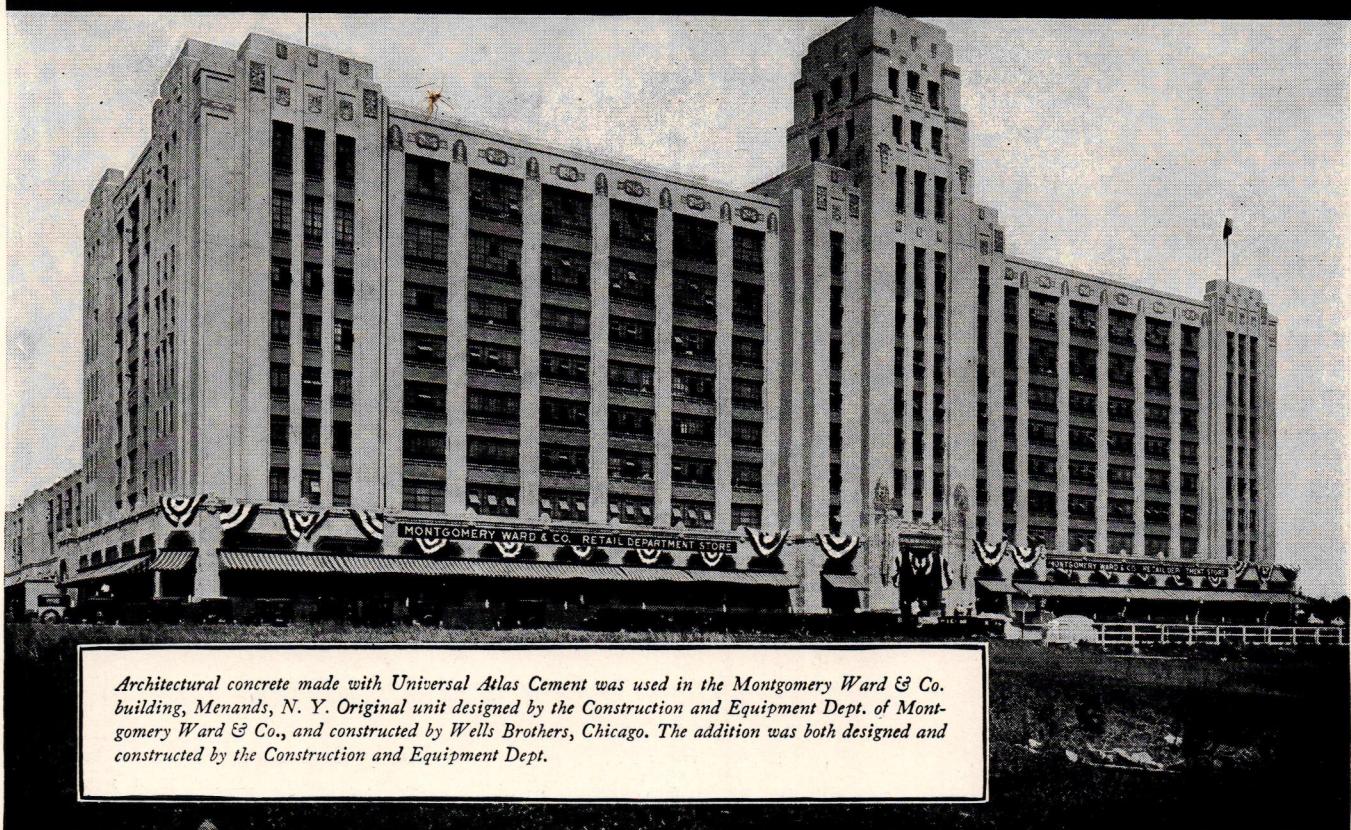
## Bauhaus Announces Faculty Appointments

The New Bauhaus, American School of Design, in Chicago, announces the following additions to its staff beginning with the Fall semester: Herbert Bayer, Berlin, Head of the Light Workshop; Jean Helion, Paris, Head of the Color Workshop; George F. Keck, Chicago, Architecture and Engineering; Xanti Schawinsky, Black Mountain College, N. C., Head of Stage and Exhibition Workshop.

The New Bauhaus recently completed the second semester of its first year and the work of the students is now on display at the school. The required preliminary course gives the fundamentals of the sciences, shop-work, modeling, drawing, lettering, photography, and music, and its objective is to develop the student's inventiveness, making him conscious of his creative power. The Bauhaus seeks to keep the sincerity of emotion, the truth of observation, and the creativeness of the child in the work of the adult. The Fall term for 1938-1939 will open on September 26, 1938.

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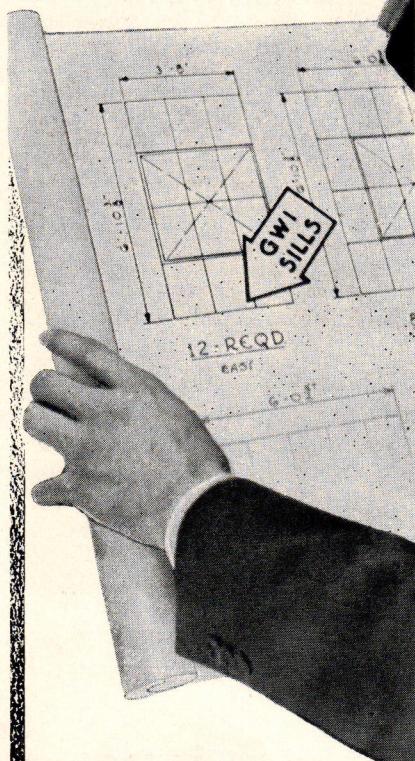
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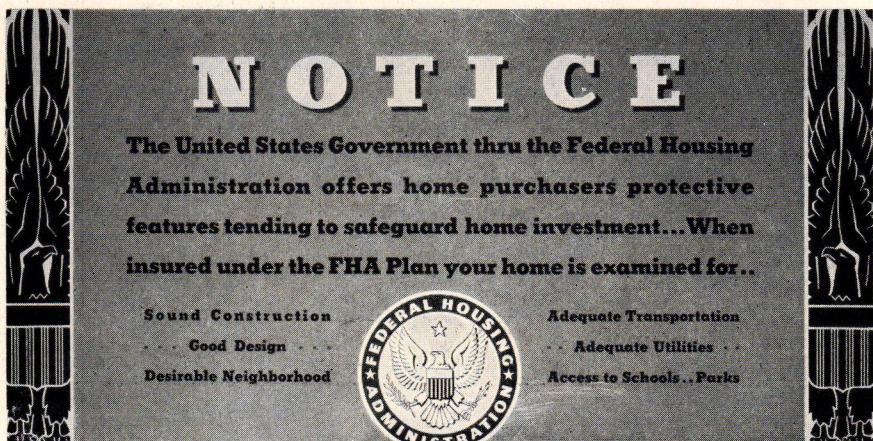


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*The Tilrose Studio Homes, above, located down in the "V" formed by two railroad embankments about half a mile from the Woodside Station on Long Island are offered to prospective homeowners under the FHA Single Mortgage System, and are advertised as "Inspected and Approved by the Federal Housing Administration," whose basic requirements for investment are recited on the notice below*



*(Continued from Page 14)*

tigation of the useless East Wind." Officers include William E. Thompson, Chief Tail-Twister; Walter H. Pratt and Davis Hamerstrom, Pourers. The same group will hold metamorphic exercises in November and become the "Get-Winter Club."

This is indeed the torporific month of vacationists and transient visitors who seek "relief" from heat or variety in life. Among the latter came Porter and Mrs. Varney, with scrumptious trailer, roaring through town on a great swing about this nation indivisible. Bud Varney, never party to "Get-Summer" movements or the Saturday bath theory, is now a confirmed Floridian and wishes to discourage ill-advised search for architectural prosperity in that quarter.

Nem Culin, particular pride of the B.A.C. atelier, checked in from New York where he contributes to the greatness of your World of Tomorrow. The Culin respects are tendered to his Boston friends.

Royal Barry Wills has been enjoying the sequestered life at Great East Lake. Lulled into an insouciant regard for conventions in dress by his

woody surroundings, he came to town recently as garterless as a new-born babe and sat for Life's photographer Art Griffin, who recorded the omission for posterity.

There are a few philosophical reflections to be dredged out of recreational choices. We know, for example, that Ralph Coolidge Henry maneuvers the family Buick up into Carter Notch Valley on half an excuse and that his partner, Henry P. Richmond, prefers water colors and the salty quaintness of Grand Manan. Charles D. Maginnis frequents Cape Cod, down Pocasset way, and many another architect's averages, as an amateur yachtsman, are published weekly during the sailing season.

An annual fortnight, with pay, has ceased to be a commonplace in Boston, owing to the short tenure of architectural employment, but among the lucky ones Stanley Setchell examined the state of civilization along five hundred miles of Atlantic coastline, and Gene Kennedy chose Gray Gables on Cape Cod.

Robert MacIntosh stowed forty pounds of gear in a rucksack and

*(Continued on Page 43)*

## Ground Is Broken For Huge Project

Ground has been broken in the Bronx Borough of New York City for the largest integral apartment community ever planned in this country, to be constructed on a 129-acre tract by the Metropolitan Life Insurance Company. Demolition of the buildings of the New York Catholic Protectory, which formerly occupied the site, has been under way since the insurance company acquired the tract and will be completed next Spring.

Within a year the moderate-rental community, self-contained to the extent of stores, theaters, neighborhood commissaries, parks and recreational facilities, garages, and central heating plant, will be complete as to roads, sewers, and utility services, and 40 per cent of the buildings, including many of those in the business section, with their surrounding parks, lawns, and malls will be ready for tenants. The entire community is expected to be completed by 1941.

The work to be done on the property immediately includes the grading of the site, the laying of storm and sanitary sewer mains, the construction and paving of drives, and excavation for those apartment buildings that are to be built at once.

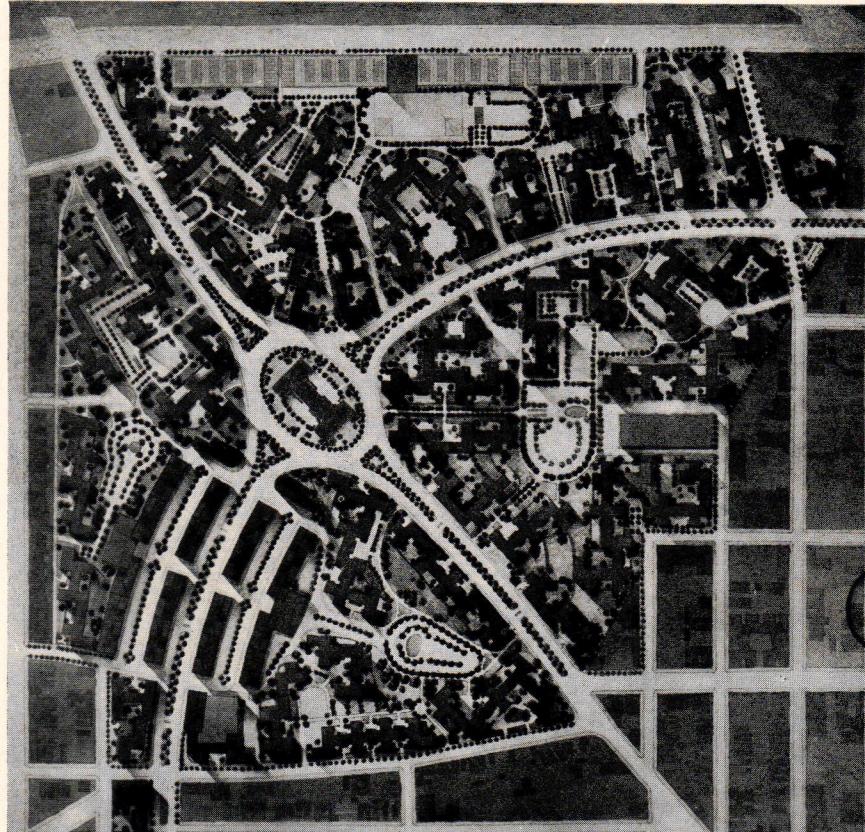
(Continued from Page 42)  
sweated it into the North Woods to climb Mt. Kataadn. When a man does that one may infer that he is of the masterful type who leaves the little woman cooling her heels with the children and liking it. Of his trip Climber MacIntosh says, ". . . and of a sudden the clouds blew clear and there I was high up on a knife-edge, with no more visible means of support than a modern evening dress. Remember you're a MacI, I said to myself, and bestriding the ridge as firmly as possible, spoke the following heartfelt words extempore—

The view I like, but not when framed as this is,  
With nothing more than sky and precipices.  
Please clouds, blow back and shroud me ever thicker,  
I'm not a bloody chamois, but a blooming city slicker.

Exhausted by the creative effort I then refreshed myself with a dextrose tablet and was soon able to carry on to the summit, despite a negative reaction to my request."

In strong contrast to the fort-nighters we have the week-enders; the Friday night to Sunday night gentry. Their choices are usually bad for the

(Continued on Page 44)



This "bird's-eye drawing" of the Metropolitan Life Insurance Company's moderate-rental housing project in the Bronx shows the informal grouping of the buildings about wide lawns and parks. The business center is seen at lower left

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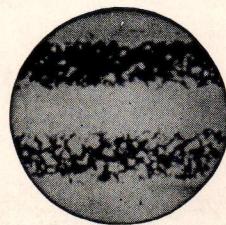
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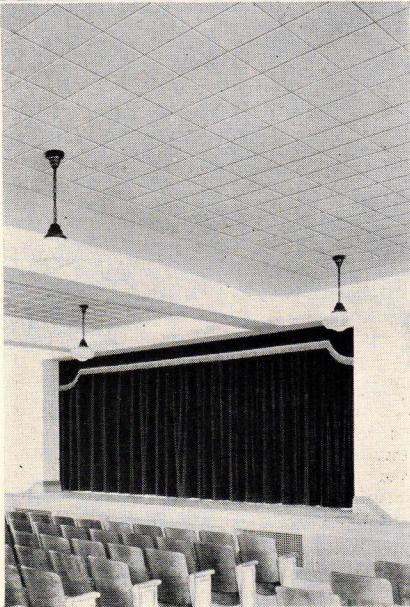
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SEPTEMBER, 1938

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Corkoustic can easily be installed over existing ceilings. Get full information now. Write for free copy of "How to Reduce Noise." Armstrong Cork Products Company, Building Materials Division, 1227 State Street, Lancaster, Pennsylvania.



## Armstrong's CORKOUSTIC

### Manufacturer Given Swedish Decoration

During the recent Swedish Tercentenary Celebration dedicated to the first Swedish group landing in America, Francis J. Plym, manufacturer, inventor, and donor of the Plym architectural scholarships at the University of Illinois, received the Commander of Vasa decoration at the behest of the King of Sweden for his achievements and contributions to institutions in this country and in Sweden.

Prince Bertil, in presenting the rare decoration at a dinner given by the State of Pennsylvania to the Royal Party, foreign delegates, and invited guests, said that he acted for his father, the Crown Prince, who was ill and hence unable to honor Mr. Plym in person as he had been requested to do, by the King.

Formerly a practising architect, Mr. Plym now is president of The Kawneer Company and is known as the originator of resilient, rustless metal store-front construction, in 1905, and of the first light, aluminum or bronze residential window, in 1933. His contributions to educational and other institutions, his scholarships provided for architectural students, his inventions and his eminence as a manufacturer were cited by Prince Bertil in the presentation.

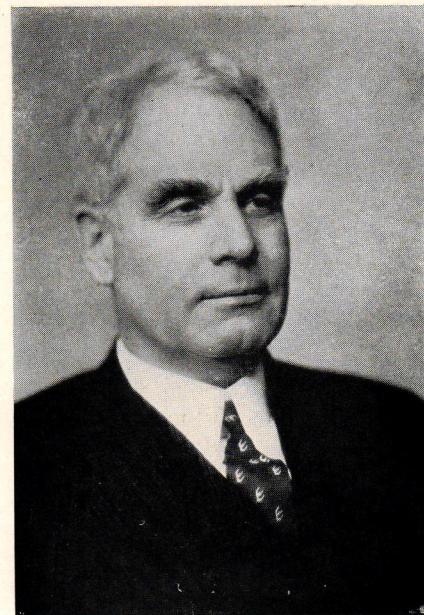
### Insulation Tests

The University of Toronto, first Canadian institution of higher learning to associate itself with the research activity of the American Society of Heating and Ventilating Engineers, has joined the University of Minnesota in working with the A.S.H.V.E. on insulation problems. A special study of the physical properties of insulating materials will be made at the university.

### Plastics Competition

Entries in the Third Annual Modern Plastics Competition will be received until September 15, it has been announced by Modern Plastics Magazine, in charge of the event. It is open to anyone who has used plastics in any way, the entries to be designed or put into use since August, 1937.

All entries will be exhibited in the Permanent Plastics Display, Tenth Floor, 425 Fourth Avenue, New York City, until December 25, following judging this month by Harvey Wiley Corbett, Architect; Morris B. Sanders, Architect; Gilbert Rohde, Industrial Designer; A. E. Marshall, Engineering Consultant; and Grace Alexandra Young, Editor, *Creative Design*.



FRANCIS J. PLYM

### Looking Backward

The ornamental and sculptural detail of the Fisheries Building of the Chicago World's Fair of 1893, erroneously credited to another in the August issue of *PENCIL POINTS*, was designed by Louis Christian Mullgardt, recalls Hubert Ripley, Boston, author of the "Chronicles of a Eupeptic." He adds:

"Lou used to make dashing charcoal drawings of ornamental detail which, when pinned on the wall across the drafting room, looked like swell photographs of beautiful sculpture."

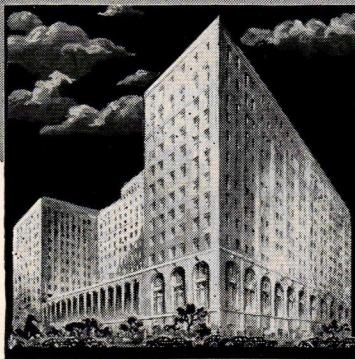
### For M.I.T. Alumni

Alumni of the Massachusetts Institute of Technology and others who have written to *PENCIL POINTS* to learn where they may obtain prints of Samuel Chamberlain's handsome drypoint of the old Rogers Building which appeared in our August issue are advised to address their orders to Goodspeed's Book Shop, 18 Beacon St., Boston, agents for this and other works of this artist.

*(Continued from Page 43)*

health and the profession, being predominantly sexy and alcoholic. After a subnormal Monday morning, at three in the afternoon these celebrants are pitched into that slough of despond known as Heliogabalic relapse, and have to keep laving their faces and cooling their wrists to stave off the deep and snoreful slumber of the voluptuary-in-trade. There is much to be said for the slogan, "Never sleep on your own time," but a lad in the drafting room, under close surveillance, is practically forced to.

LEON KEACH



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This book brings within the reach of everyone a complete picture of the principles, practices and equipment of soilless growth. To persons already engaged in growing plants, it will offer new avenues for plant work. For those not hitherto participating in raising flowers, vegetables and fruits, it will afford a splendid opportunity for developing a new and extremely fascinating hobby. Architects and laymen alike will find "Soilless Growth of Plants" packed with choice information which will make it a worthwhile investment either for pleasure or profit.

160 Pages 60 illustrations; 3 in color \$2.75

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and Craftsmen**

## A PORTFOLIO OF ALPHABET DESIGNS

By IRENE K. AMES

Alphabets distinguished and restrained, classic and original, informal and unusual, to lend life and spirit to your renderings, and to be incorporated directly into your designs wherever lettering is called for. Invaluable, time-saving material at your disposal to point up every phase of your work.

This work consists of 32 plates printed on white Montgomery antique paper, measuring ten inches by fifteen inches, pocketed in a specially designed portfolio constructed of crash finish scarlet Buckeye paper, shelf-back bound with silver vellum Roxite. The color combination of silver and scarlet makes for a finished portfolio of distinguished beauty.

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For latest information on Drawing Tables, Filing Equipment, and Drafting Room Accessories . . . refer to the new 64-page Hamilton Catalog. It contains helpful suggestions on filing tracings and drawings . . . shows 26 different styles of drawing tables . . . has a full description of the complete Hamilton Line of Drafting Furniture. Your copy is sent without obligation . . . just fill in and mail the coupon.

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# ARCHITECTURE

## AS PENCIL POINTS SEES IT

# IS A PROFESSION

*made up of Architects, Architectural Draftsmen, and Architectural Students*

- The present and continuing vigor of the profession requires the presence of *all three* of these groups within it. The present and future welfare of each of these groups is in turn bound up with the profession's welfare.
- This being so, it is not surprising to note that PENCIL POINTS, which is "published monthly for the architectural profession," finds the bulk of its subscribers within these three groups.

*Out of a Total Net Paid Circulation of 19,582*

*39.12% or 7,661 are architects*  
*23.51% or 4,603 are architectural draftsmen*  
*13.36% or 2,617 are architectural students*

In addition, *5.11% or 1,001* engineers interested in architecture are subscribers. This makes a total of *81.10% or 15,882* readers of PENCIL POINTS *who are professionally minded.*

- To show which way the wind is blowing, a recent survey conducted among the registered architects of the populous State of Ohio showed a preponderance of votes for PENCIL POINTS as the architectural magazine "which offers most valuable and stimulating editorial material for members of the profession."
- We are proud to receive this *accolade* and our Editors are determined to continue to improve the quality and value of material to be printed in PENCIL POINTS in months to come.

## PENCIL POINTS SERVES THE ARCHITECTURAL PROFESSION

# PAUL CRET MASTER OF DESIGN

Will be Featured in PENCIL POINTS for October

PAUL PHILIPPE CRET—F. A. I. A. and recipient of the highest awards that can be bestowed by his fellow architects and his fellow citizens—one of the best loved and most talented of contemporary practitioners—is justly included in the category of “Masters of Design.” His life and works will be the subject of a 32-page presentation in the October 1938 issue of PENCIL POINTS, illustrated with plates showing representative examples of his work as an architect, including many hitherto unpublished items. You will want to secure and preserve your copy of this exceptionally significant record of the achievements of one of the profession’s acknowledged leaders.

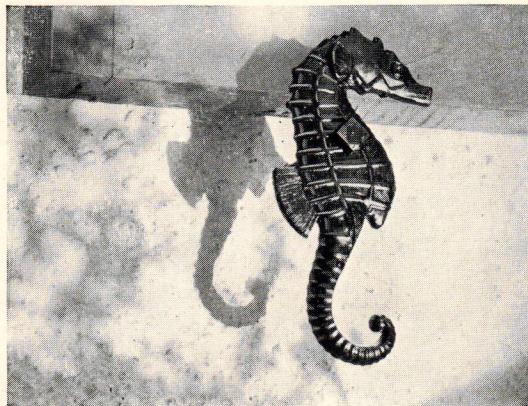
ALSO in the October PENCIL POINTS will be such regular and valuable features as Talbot Hamlin’s monthly critical discussion; a group of eight comparative details of Modern Fireplaces; and four more of Don Graf’s inimitable Data Sheets. An article of more than ordinary interest and importance, by James C. Rose, will suggest and analyze a new and contemporary approach to landscape design, a field which is only beginning to feel the pressure of modernism.

# NEW PRODUCTS

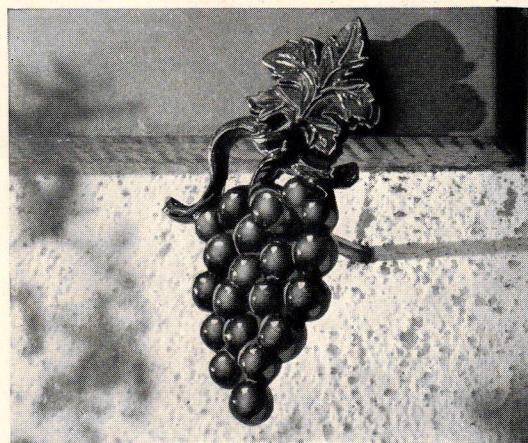
## *Changes in Personnel, etc.*

### NEW COLONIAL SHUTTER DOG DESIGNS

Austin Brucklacher, 315 Camp Street, Louisville, Ky., has recently added several new designs of Colonial shutter dogs to his collection of early hand-made hardware.



The sea horse design which retains the balance and general shape of the standard S-shaped shutter dog, has been received, it is stated, as one of the most ornamental yet simple pattern available. The grape design is copied



from an example discovered in New Orleans and is particularly charming wherever trees or vines cast a dappled light upon the wall. Both patterns are hand-cast from rustless, enduring metal.

### OSCAR B. BACH TO DIRECT FABRICATION OF COLORED STAINLESS STEEL HOUSES

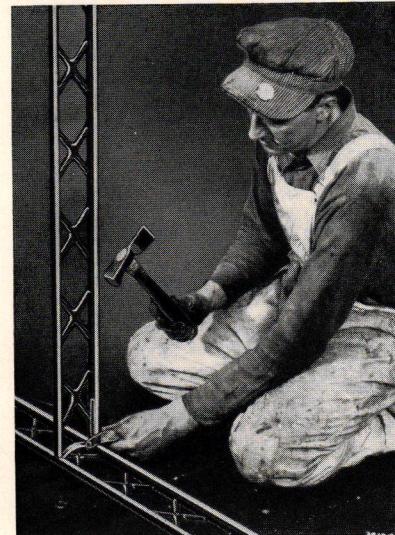
Fabrication of complete houses from the newest of materials—permanently colored stainless steel—is contemplated by the newly-organized Bach Products, Inc., headed by Oscar B. Bach, well known designer and craftsman in metal, it has been announced.

The firm has leased in Paterson, N. J., a plant at 288 East 18th St., where commercial experiments in the construction of low cost housing of colored stainless steel, a process developed by Mr. Bach, will get under way immediately. This medium makes it possible for architects and builders to produce homes that are unusually beautiful, but which are also impervious to time and the elements.

Bach Products, Inc., will also manufacture a variety of decorative metal accessories of Mr. Bach's design.

**NEW STEEL STUD ANNOUNCED BY MILCOR**  
Announcement is made by the Milcor Steel Co., Milwaukee, Wis., of a new one-piece metal wall stud, for which is claimed exceptional strength. Designed with extreme care from an engineering standpoint, this stud, it is stated, also affords simplicity in erection and positive locking to floor and ceiling.

The use of a one-piece metal stud for walls which must be firesafe and sound retardant, and also provide for carrying pipes, conduits, and ducts is growing rapidly. The Milcor Steel stud has channel sides, large uniform openings, and reinforced X-shaped members as well as an effective shoe and clip arrangement as its exclusive features. In addition it offers fire-safety, earthquake resistance, insulating value, sound resistance, light weight and the elimination of plaster cracks as attendant advantages.



### NEW PROPELLER—FAN TYPE UNIT HEATER

A propeller-fan type unit heater of entirely new design has just been announced by The Herman Nelson Corp., Moline, Ill.

The new unit, designed for steam or hot water heating of all types of industrial and commercial locations, is said to combine numerous outstanding features of design and construction to produce a new high in space heating efficiency and quiet operation.

The fan is of new streamlined design with large face area. The heating element is designed with loops to absorb difference in expansion and contraction between individual tubes. Entire tube and loop is fabricated of red brass with no connecting joint to weaken construction. Tubes project from side of supply header, above center line, assuring proper distribution of steam. A patented stay tube maintains proper relationship between headers. The motor, for single, two or three speed operation, and fan assembly are mounted on steel arms designed to absorb and dissipate torsional vibration preventing transmission of vibration to cabinet. The louvers are adjustable and curved to direct heat downward. Grille or discharge nozzle may be used in place of louvers.



The cabinet, of attractive rounded design, is built of heavy gauge sheet steel and finished in steel grey Morocco. The hanger and steam connection are located near the center of gravity for ease of installation.

The unit is available in a complete range of 18 sizes for use with steam or hot water. Air capacities range from 275 c.f.m. to 5060 c.f.m.

#### NEW BATHROOM AIR CONDITIONER

A new appliance, known as the Scott Air-Vac, equipped with suction motor, which eliminates odors in the bathroom or lavatory, is announced by the Scott Pump Co., Rochester, N. Y.

The slightest pressure on the toilet seat engages

switch and starts the motor which causes enough vacuum to completely cleanse the air before it can escape into the bathroom and other adjoining rooms. The moment the pressure on the seat is released the switch is immediately disengaged and the motor stops.

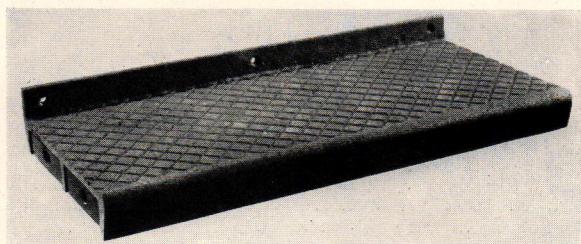
To install the Scott Air-Vac all that is nec-

essary is to remove the two bolts which go down into the porcelain section of the bowl. These bolts hold the seat assembly in place, and the Air-Vac plate simply slips over these two bolts and rests on the bowl between the seat and the top of porcelain. The fumes are destroyed by mechanical action and ejected through a 2" opening in the partition or wall. A  $\frac{5}{8}$ " hole is also made in the outer wall opposite the 2 in. wall in the inner wall. The  $\frac{5}{8}$ " hole is made to allow fresh air to come into the partition.

There is no necessity to cut and fit pipe, as all joints and connections are of slip-fit type and are adjustable to any angle and any style toilet bowl.

#### NON-SKID FLOORING AND STAIR TREADS

An improved type of non-slip safety metal, which is said to be highly resistant to rust and acid corrosion and unaffected in its non-slip properties by water, oil or other slippery liquid substances, is being manufactured by The American Brake Shoe and Foundry Company, 230 Park Avenue, New York, N. Y. This new product is marketed under the trade name of Non-Slip Absco Metal.



Electric furnace abrasive grains, said to be the best anti-skid and hardest material known, are applied to cast iron, bronze, aluminum or nickel silver, by a special process of casting. The abrasive grains are deeply and uniformly bonded into the metal at the time of casting, thus forming a virtually indestructible bond between the abrasive grains and the metal. The grains

protrude sufficiently above the surface to give a "bite" to the metal which eliminates all possibility of slipping.

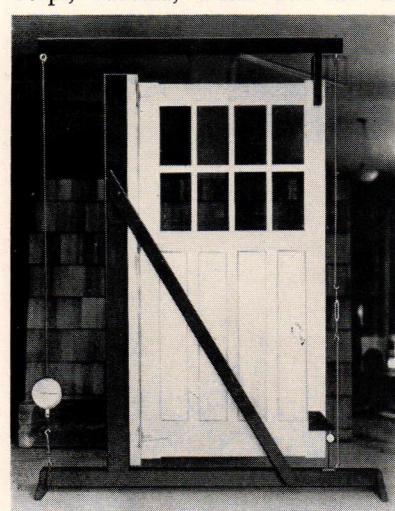
It is stated that the unique casting process used by American Brake Shoe engineers makes it possible for the first time to assure a wear and corrosion resistant "nose" to stair treads as the abrasive grains are carried entirely over the "nose" and concentrated at this vital slipping point. Sluffing out and loss of abrasive grains, due to corrosion along the "nose," are definitely prevented by this method, as no grinding is necessary to remove raw fins of metal on the casting ridge.

Absco metal is extensively used for stair treads, ramps, industrial floors, platforms, elevator door sills, swing type door thresholds, trench covers, etc.

#### WHEELER OSGOOD ANNOUNCES NEW GARAGE DOOR LINE

A complete new line of lightweight garage doors has been placed on the market by the Wheeler Osgood Sales Corp., Tacoma, Wash. The new line, called the "One

Thirty-Eight" by the manufacturer, is made with  $1\frac{3}{8}$  in. instead of the  $1\frac{3}{4}$  in. stiles and rails used in conventional type garage doors.



A reduction of weight, averaging 25% per door, is secured. Construction improvements, it is stated, provide strength equal to and in some cases greater than that of the doors of

the same design with conventional  $1\frac{3}{4}$  in. stiles and rails. An improved form of deeper sticking, using a modified quarter-round on the outer face and square sticking on the inner face, provides a greatly increased bearing surface in the joints. This construction provides greater strength and offsets the strength factor of the bulkier construction.

According to the manufacturer, the benefits to the user are a more satisfactory, lower-cost, higher-value garage door. The possibility of sagging and other door troubles are reduced to a minimum; operation of the door is easier and maintenance costs are practically eliminated.

#### HIGGINS ADDS TO SALES STAFF

Chas. M. Higgins & Co., Inc., Brooklyn, N. Y., ink manufacturers, announce two additions to its sales force. Bertram Cholet, who has been with the company since April 1st, will be particularly occupied in developing sales possibilities in the educational field and in general sales promotion work, besides supplementing Harry Tehan's travelling in the East and in New York City.

E. J. Bradley, who joined the company in July, will make his headquarters in Chicago and will cover the Middle Western states.

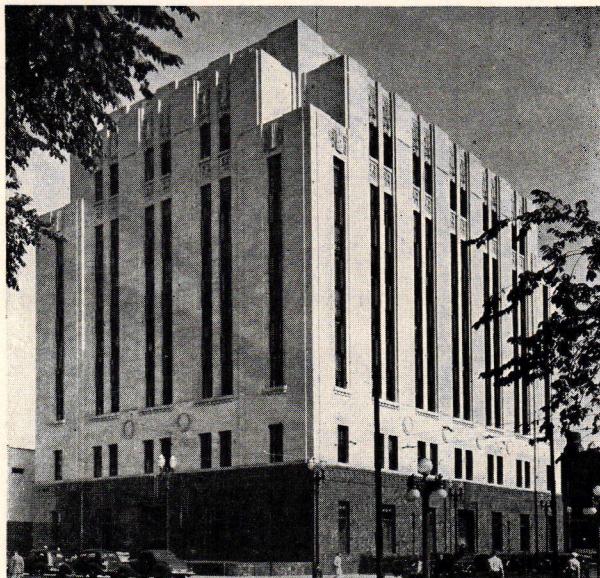
Joseph Weston, Los Angeles architect and former chief architect of the National Resettlement Administration, has been appointed the Southwestern representative of the Douglas Fir Plywood Association with headquarters in Los Angeles.

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THE Tri-State Telephone Company Building at St. Paul, Minnesota, illustrated, is a good example of adequate calking as recognized by present day specifications. Not only are all exterior window frames, door frames, and spandrels, calked with Pecora, but this dependable material was also used for bedding horizontal expansion joints in the building, for calking expansion joints between sidewalk and building, and for pointing up stone work. The architect, C. H. Johnston of St. Paul. Genl. Contrs., Paul Steenburg Const. Co. of St. Paul. Calking by Hauenstein & Burmeister, Inc., also of St. Paul.

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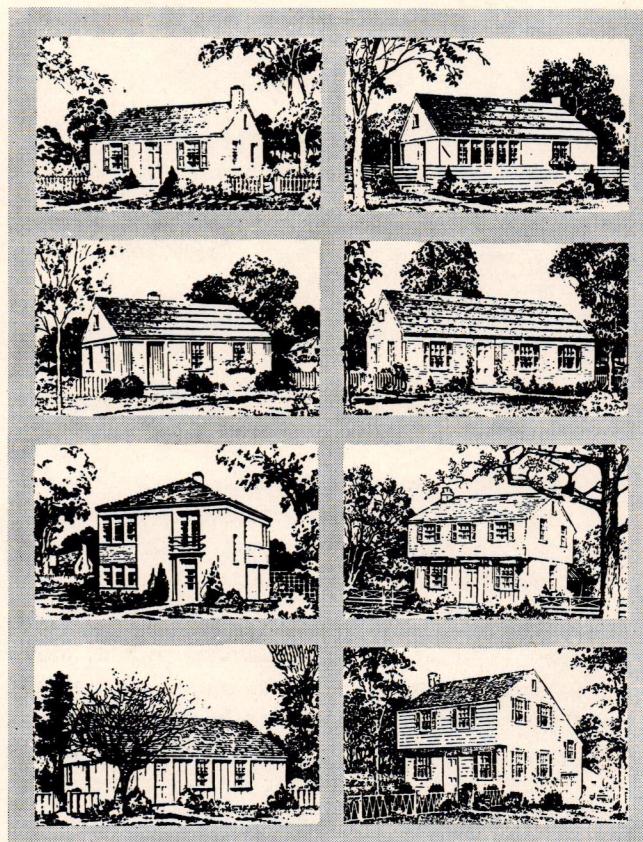
Built by the National Lumber Manufacturers Association and the National Retail Lumber Dealers Association, these eight small homes in Washington, D. C. are demonstrating to the building industry that the comfort and savings effected by insulation are available for all homes regardless of price. Here, too, quality is important—Balsam-Wool has been used in each of the eight homes.

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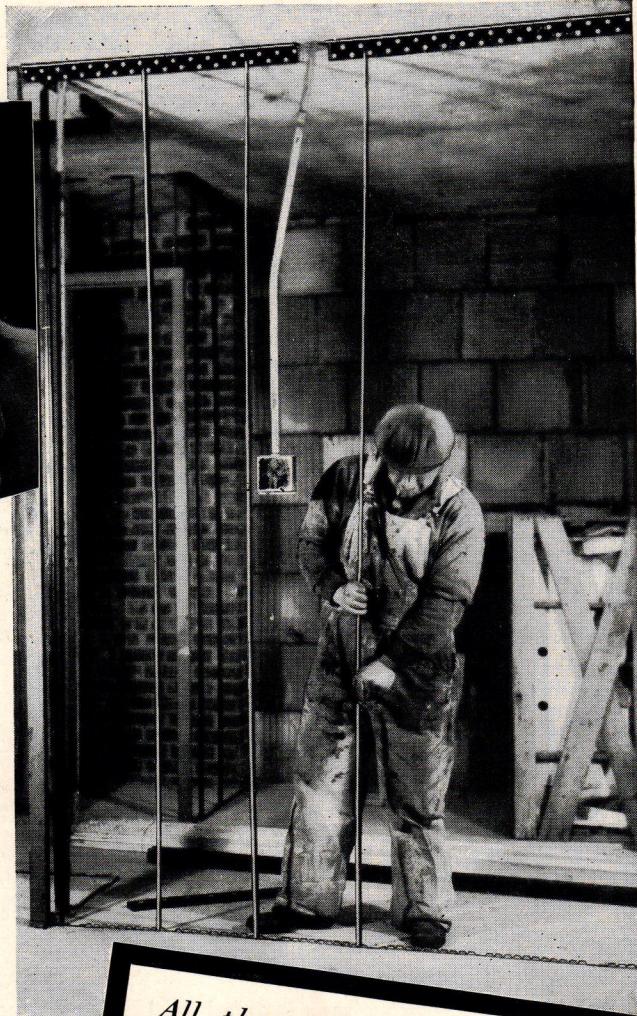
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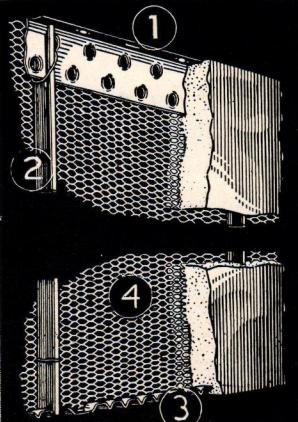


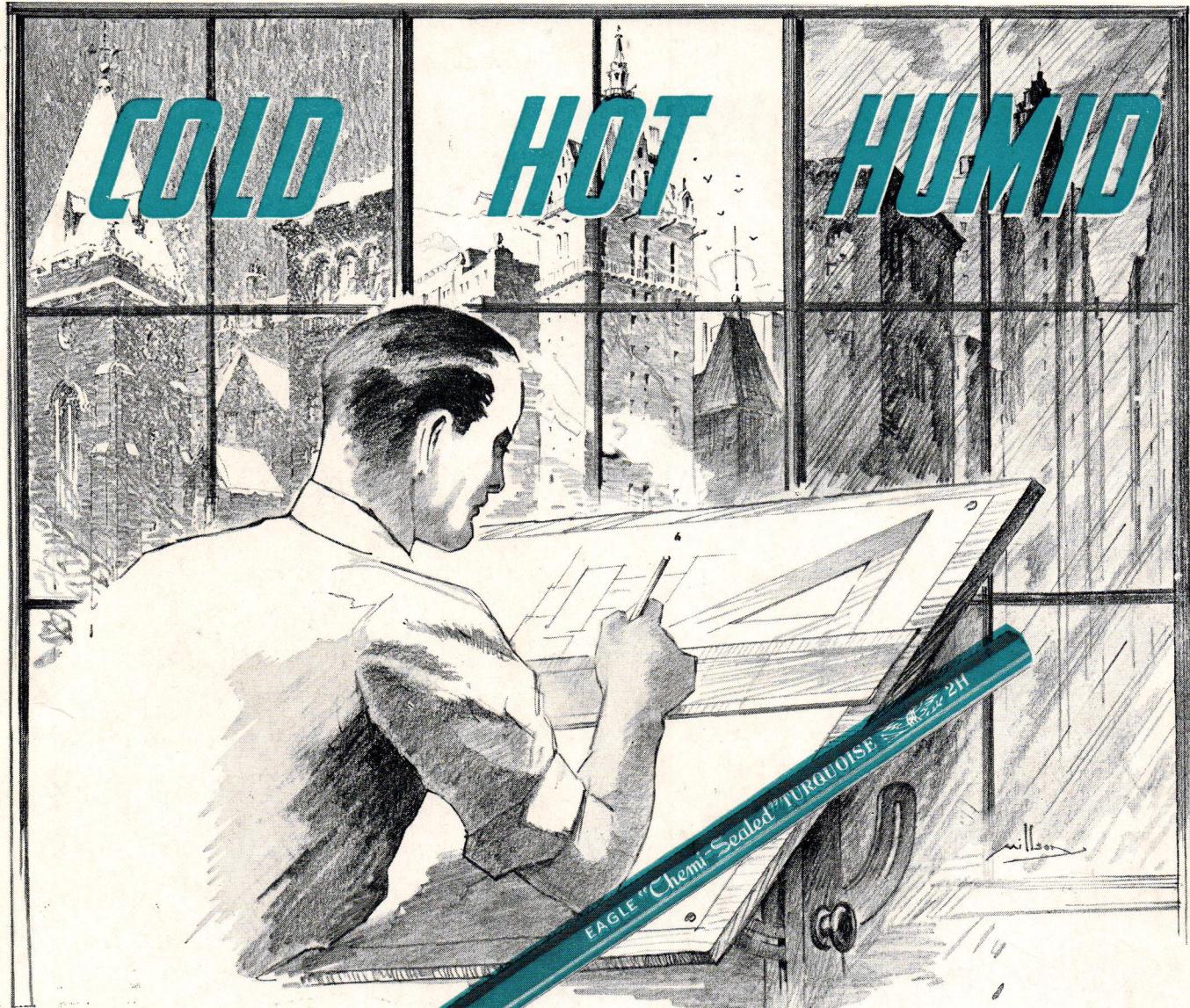
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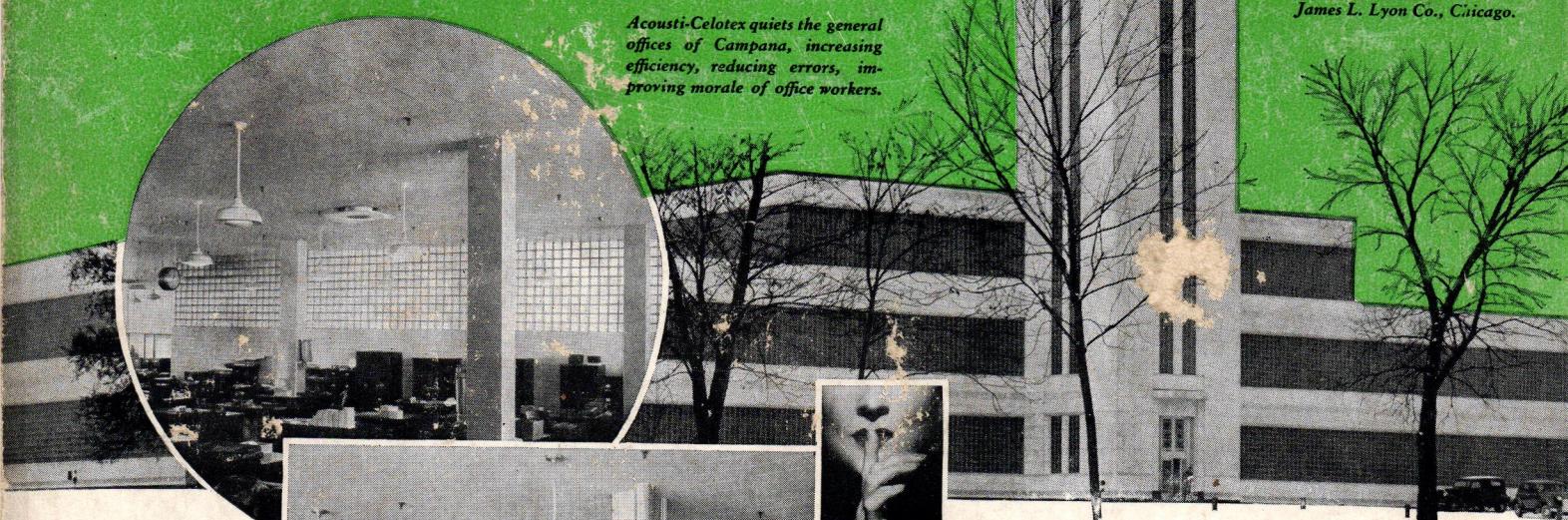
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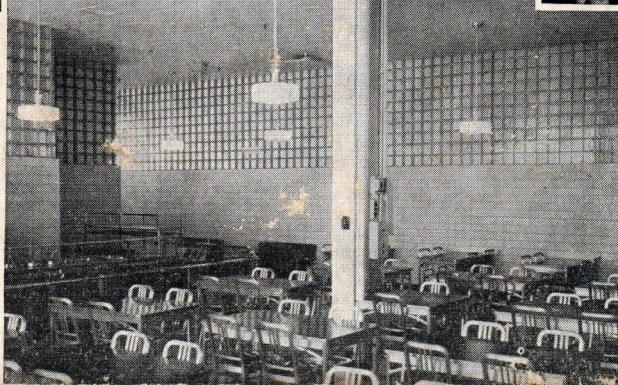
U. S. PATENT OFFICE

Acousti-Celotex quiets the general offices of Campana, increasing efficiency, reducing errors, improving morale of office workers.



Copyright 1938, The Celotex Corporation

Campana believes the restfulness of quiet should accompany noon luncheon, so Acousti-Celotex stills the clatter of voices, china, and silver in the cafeteria.



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**VIBRAFRAM** **ABSORBEX**

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